



STIC Search Report

EIC 3700

STIC Database Tracking Number: 102528

TO: Cameron Saadat
Location: cp2 10c04
Art Unit: 3713
Monday, September 08, 2003

Case Serial Number: 09/839638

From: John Sims
Location: EIC 3700
CP2, 2C08
Phone: 308-4836

john.sims@uspto.gov

Search Notes

Here are your search results. I've noted those results that appear to be most relevant, but also included some tangential material.

12/3/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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015378333 **Image available**
WPI Acc No: 2003-439271/200341
XRPX Acc No: N03-350478

Surgical instrument e.g. endoscope for medical examination, applies force to elongated endo vascular tool as haptic indication to user, when elongated tool is moved to predetermined position by user
Patent Assignee: BROWN J M (BROW-I); COHEN R F (COHE-I); CUNNINGHAM R L (CUNN-I); FELDMAN P G (FELD-I); MERRIL G L (MERR-I)
Inventor: BROWN J M ; COHEN R F; CUNNINGHAM R L ; FELDMAN P G ; MERRIL G L

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030040737	A1	20030227	US 2000189838	P	20000316	200341 B
			US 2001811358	A	20010316	

Priority Applications (No Type Date): US 2000189838 P 20000316; US 2001811358 A 20010316

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030040737	A1	11	A61B-017/00	Provisional application	US 2000189838

12/3/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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015078808 **Image available**
WPI Acc No: 2003-139326/200313
XRPX Acc No: N03-110646

Medical practitioner trainee interface method for medical training simulation, involves outputting haptic sensation when cursor interacts with region within graphic representation of portion of human or animal body
Patent Assignee: COHEN R F (COHE-I); CUNNINGHAM R L (CUNN-I); DUMAS R H (DUMA-I); FELDMAN P G (FELD-I); MERRIL G L (MERR-I); TASTO J L (TAST-I)
Inventor: COHEN R F; CUNNINGHAM R L ; DUMAS R H; FELDMAN P G ; MERRIL G L ; TASTO J L

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020163497	A1	20021107	US 2001848966	A	20010504	200313 B

Priority Applications (No Type Date): US 2001848966 A 20010504

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020163497	A1	41	G09G-005/00		

12/3/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

014044968 **Image available**
WPI Acc No: 2001-529181/200158
Related WPI Acc No: 1999-458990

XRPX Acc No: N01-392745

Interface device for surgical instruments, connects surgical instrument with computers which control graphic image by using signal output by sensor

Patent Assignee: BROWN J M (BROW-I); COHEN R F (COHE-I); CUNNINGHAM R L (CUNN-I); FALK R B (FALK-I)

Inventor: **BROWN J M** ; COHEN R F; **CUNNINGHAM R L** ; FALK R B

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20010016804	A1	20010823	US 9625433	A	19960904	200158 B
			US 97923477	A	19970904	
			US 9872672	A	19980128	
			US 98110661	A	19981202	
			US 99116545	A	19990121	
			US 99237969	A	19990127	
			US 2000738424	A	20001215	

Priority Applications (No Type Date): US 2000738424 A 20001215; US 9625433 P 19960904; US 97923477 A 19970904; US 9872672 P 19980128; US 98110661 P 19981202; US 99116545 P 19990121; US 99237969 A 19990127

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20010016804	A1	35	G06G-007/48	Provisional application US 9625433

CIP of application US 97923477
Provisional application US 9872672
Provisional application US 98110661
Provisional application US 99116545
CIP of application US 99237969
CIP of patent US 6106301

12/3/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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012652885 **Image available**

WPI Acc No: 1999-458990/199938

Related WPI Acc No: 1998-193862; 2001-529181

XRPX Acc No: N99-343338

Interface device for computerized medical simulation systems

Patent Assignee: HT MEDICAL SYSTEMS INC (HTME-N); IMMERSION MEDICAL INC (IMME-N)

Inventor: ALEXANDER D; **BROWN J M** ; CABAHUG E; CHURCHILL P J; COHEN R F;

CUNNINGHAM R L ; FELDMAN B; FONTAYNE D; **MERRIL G L** ; TURCHI M; BROWN M J

Number of Countries: 082 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9939317	A1	19990805	WO 99US1664	A	19990127	199938 B
AU 9922420	A	19990816	AU 9922420	A	19990127	200002
GB 2349730	A	20001108	WO 99US1664	A	19990127	200058
			GB 200021185	A	20000829	
EP 1103041	A1	20010530	EP 99902444	A	19990127	200131
			WO 99US1664	A	19990127	
GB 2349730	B	20030409	WO 99US1664	A	19990127	200325
			GB 200021185	A	20000829	
GB 2384613	A	20030730	GB 200021185	A	19990127	200351
			GB 20032744	A	20030206	

Priority Applications (No Type Date): US 99116545 P 19990121; US 9872672 P 19980128; US 98105661 P 19981026

John Sims EIC 3700 308-4836

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9939317	A1	E	57	G09B-023/28	
Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
AU 9922420	A				Based on patent WO 9939317
GB 2349730	A			G09B-023/28	Based on patent WO 9939317
EP 1103041	A1	E		G09B-023/28	Based on patent WO 9939317
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
GB 2349730	B			G09B-023/28	Based on patent WO 9939317
GB 2384613	A			G09B-023/28	Div ex application GB 200021185

12/3/5 (Item 5 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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012652883 **Image available**

WPI Acc No: 1999-458988/199938

XRPX Acc No: N99-343336

Instrument interface for vascular access simulation systems

Patent Assignee: HT MEDICAL SYSTEMS INC (HTME-N); IMMERSION MEDICAL INC (IMME-N)

Inventor: CUNNINGHAM R L ; FELDMAN B; FELDMAN P; MERRIL G L ; CUNNINGHAM R L

Number of Countries: 082 Number of Patents: 010

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9939315	A2	19990805	WO 99US1822	A	19990128	199938 B
AU 9924785	A	19990816	AU 9924785	A	19990128	200002
GB 2349731	A	20001108	WO 99US1822	A	19990128	200058
			GB 200021186	A	20000829	
EP 1051698	A2	20001115	EP 99904380	A	19990128	200059
			WO 99US1822	A	19990128	
JP 2002502058	W	20020122	WO 99US1822	A	19990128	200211
			JP 2000529698	A	19990128	
US 6470302	B1	20021022	US 9872809	P	19980128	200273
			US 99238559	A	19990128	
US 20030069719	A1	20030410	US 9872809	P	19980128	200327
			US 99238559	A	19990128	
			US 2002238990	A	20020909	
GB 2381933	A	20030514	GB 200021186	A	20000829	200333
			GB 20033858	A	20030219	
GB 2349731	B	20030604	WO 99US1822	A	19990128	200345
			GB 200021186	A	20000829	
GB 2381933	B	20030813	GB 200021186	A	19990128	200355
			GB 20033858	A	20030219	

Priority Applications (No Type Date): US 9872809 P 19980128; US 99238559 A 19990128; US 2002238990 A 20020909

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9939315	A2	E	29	G09B-000/00	
Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR					

TT UA UG US UZ VN YU ZW
 Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
 IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
 AU 9924785 A Based on patent WO 9939315
 GB 2349731 A G09B-023/28 Based on patent WO 9939315
 EP 1051698 A2 E G09B-023/28 Based on patent WO 9939315
 Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI
 LU MC NL PT SE
 JP 2002502058 W 38 G09B-009/00 Based on patent WO 9939315
 US 6470302 B1 G06G-007/48 Provisional application US 9872809
 US 20030069719 A1 G06G-007/48 Provisional application US 9872809

 Cont of application US 99238559
 Cont of patent US 6470302
 GB 2381933 A G09B-023/28 Div ex application GB 200021186
 GB 2349731 B G09B-023/28 Based on patent WO 9939315
 GB 2381933 B G09B-023/28 Div ex application GB 200021186

12/3/6 (Item 6 from file: 350)
 DIALOG(R)File 350:Derwent WPIX
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011776952 **Image available**
 WPI Acc No: 1998-193862/199817
 Related WPI Acc No: 1999-458990
 XRPX Acc No: N98-153386

Interface device for simulation system enabling user to perform medical procedure - has navigation peripheral for user selective manipulation, provides navigation data of interface manipulation, simulates traversal of navigation instrument via simulated anatomy in accordance with manipulation

Patent Assignee: HT MEDICAL SYSTEMS INC (HTME-N); HT MEDICAL INC (HTME-N)
 Inventor: MERRIL G L ; FELDMAN P G ; MEGLAN D A
 Number of Countries: 078 Number of Patents: 003
 Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9810387	A2	19980312	WO 97US15552	A	19970904	199817 B
AU 9742495	A	19980326	AU 9742495	A	19970904	199832
US 6106301	A	20000822	US 9625433	A	19960904	200042
			US 97923477	A	19970904	

Priority Applications (No Type Date): US 9625433 P 19960904; US 97923477 A 19970904

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
WO 9810387	A2 E	61	G08B-000/00	
Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW				
Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW				
AU 9742495	A		A61B-017/00	Based on patent WO 9810387
US 6106301	A		F41G-003/26	Provisional application US 9625433
?				

6/AB/1 (Item 1 from file: 350)
DIALOG(R)File 350:(c) 2003 Thomson Derwent. All rts. reserv.

Abstract (Basic): WO 200118617 A1

Abstract (Basic):

NOVELTY - A **haptic** interface comprises an electrorheological fluid-based component coupled with an articulating member. The forces on the member are transmitted to a human operator via a change in viscosity of the fluid in proportion to a force to be transmitted.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a remote mechanical mirroring system comprising the **haptic** interface. The **haptic** interface is affixed to an end-effector defined at an extremity of a robotic arm. It is integrated with an interactive **computer modeling** system, and further integrated with a force feedback multiple degree-of-freedom manipulator(s).

USE - The **haptic** interface enables human operators to feel and intuitively mirror the stiffness or forces at remote sites for the control of robots as human surrogates. It can be used in simulators, in military applications, as a bomb disabler, the entertainment industry, the nuclear industry, including removal of hazardous waste and decommissioning of nuclear sites, space robotics, medical research and education, telesurgery, and rehabilitation of patients from **surgery** or stroke.

ADVANTAGE - The inventive **haptic** interface accurately simulates the mobile and sensory capabilities of anthropomorphic movement. It accurately detects interaction between the wearer and the environment, and has improved lifting capabilities.

pp; 44 DwgNo 0/13

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18/3/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO
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07582416 **Image available**
HEART LOAD EVALUATING DEVICE

PUB. NO.: 2003-076259 [JP 2003076259 A]
PUBLISHED: March 14, 2003 (20030314)
INVENTOR(s): HOTEHAMA MASARU
TAKEMORI TOSHIKAZU
APPLICANT(s): OSAKA GAS CO LTD
APPL. NO.: 2001-272039 [JP 20011272039]
FILED: September 07, 2001 (20010907)

18/3/2 (Item 2 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2003 JPO & JAPIO. All rts. reserv.

06838860 **Image available**
INTRACARDIAL ELECTRICAL PHENOMENON-DIAGNOSING DEVICE

PUB. NO.: 2001-066355 [JP 2001066355 A]
PUBLISHED: March 16, 2001 (20010316)
INVENTOR(s): OYU SHIGEHARU
TAKADA YOICHI
AIDA SATOSHI
APPLICANT(s): TOSHIBA CORP
APPL. NO.: 11-243863 [JP 99243863]
FILED: August 30, 1999 (19990830)

18/3/3 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

015452765 **Image available**
WPI Acc No: 2003-514907/200349
XRPX Acc No: N03-408536

**Method and device for computer based segmental visual processing and
analysis of myocardial diastolic wall thickness and systolic wall
thickness increases using a segmental analysis tool for myocardial wall
thickness increase**

Patent Assignee: FROEHLICH M (FROE-I)

Inventor: FROEHLICH M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 10158229	A1	20030612	DE 1058229	A	20011115	200349 B

Priority Applications (No Type Date): DE 1058229 A 20011115

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
DE 10158229	A1	3	G06F-019/00	

18/3/4 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

015340981 ****Image available****

WPI Acc No: 2003-401919/200338

XRPX Acc No: N03-320549

Three-dimensional object reproduction method e.g. for pathologic collection of heart with defects, involves smoothing and/or equalizing picture data of 3D object so as to obtain modified picture data

Patent Assignee: DKFZ DEUT KREBSFORSCHUNGSZENTRUM (DKFZ-N); DEUT

KREBSFORSCHUNGSZENTRUM STIFTUNG (DEKR-N)

Inventor: MAKABE M; MEINZER H; THORN M

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030030635	A1	20030213	US 2002167542	A	20020611	200338 B
CA 2380911	A1	20021212	CA 2380911	A	20020404	200345

Priority Applications (No Type Date): EP 2001114253 A 20010612

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030030635	A1		6	G06T-015/00	
CA 2380911	A1	E		G06F-003/00	

18/3/5 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015261422 ****Image available****

WPI Acc No: 2003-322351/200331

XRPX Acc No: N03-257558

Heart condition evaluation apparatus has circulating system modeling unit that calculates e.g. blood pressure and heart rate based on movement operating time and movement strength index

Patent Assignee: OSAKA GAS CO LTD (OSAG)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2003076259	A	20030314	JP 2001272039	A	20010907	200331 B

Priority Applications (No Type Date): JP 2001272039 A 20010907

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2003076259	A		23	G09B-009/00	

18/3/6 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014797308

WPI Acc No: 2002-618014/200266

Related WPI Acc No: 1993-272579; 1993-272580; 1997-117780; 1998-168893; 1999-008656

XRAM Acc No: C02-174607

Treating or preventing atherosclerosis in mammals comprising extracting aliquot of blood from subject which is treated ex vivo with stressors e.g. oxidizing agent, ultraviolet radiation, and administering treated blood to subject

Patent Assignee: BOLTON A E (BOLT-I)

Inventor: BOLTON A E

Number of Countries: 001 Number of Patents: 001

John Sims EIC 3700 308-4836

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020086064	A1	20020704	US 92832798	A	19920207	200266 B
			US 92941327	A	19920904	
			US 94352802	A	19941201	
			US 96754348	A	19961122	
			US 99436243	A	19991109	

Priority Applications (No Type Date): US 99436243 A 19991109; US 92832798 A 19920207; US 92941327 A 19920904; US 94352802 A 19941201; US 96754348 A 19961122

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20020086064	A1	17	A61K-033/00	CIP of application US 92832798
				CIP of application US 92941327
				CIP of application US 94352802
				CIP of application US 96754348

18/3/7 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX
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014612635 **Image available**
WPI Acc No: 2002-433339/200246
Related WPI Acc No: 2002-518280
XRAM Acc No: C02-123138
XRPX Acc No: N02-340933

Treatment of heart failure comprises delivering a liquid filler into the left ventricle and converting the filler into a noncompressible rigid state

Patent Assignee: JAYARAMAN S (JAYA-I)
Inventor: JAYARAMAN S
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6360749	B1	20020326	US 98103824	A	19981009	200246 B
			US 99414708	A	19991008	

Priority Applications (No Type Date): US 98103824 P 19981009; US 99414708 A 19991008

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6360749	B1	20	A61B-019/00	Provisional application US 98103824

18/3/8 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX
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013860506 **Image available**
WPI Acc No: 2001-344718/200137
Related WPI Acc No: 2003-017515
XRPX Acc No: N01-249641

Mathematical model, e.g. of human heart and thorax, has base objects whose spatial relationships are altered by transformation operators to cause variation in geometry of model

Patent Assignee: GENERAL ELECTRIC CO (GENE)
Inventor: CLINE H E; EDIC P M; ISHAQUE A N; YAVUZ M
Number of Countries: 002 Number of Patents: 002
Patent Family:

John Sims EIC 3700 308-4836

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 10057810	A1	20010531	DE 1057810	A	20001122	200137 B
JP 2001222705	A	20010817	JP 2000355153	A	20001122	200155

Priority Applications (No Type Date): US 99448353 A 19991123

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 10057810	A1	14	G06T-017/00		
JP 2001222705	A	47	G06T-001/00		

18/3/9 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013726592 **Image available**

WPI Acc No: 2001-210822/200121

XRPX Acc No: N01-150655

Computational model for simulating and predicting electrical and chemical dynamics of heart, utilizes computerized representation of heart anatomy and mathematical equations describing spatio-temporal behavior of biophysical quantities

Patent Assignee: PHYSIOME SCI INC (PHYS-N)

Inventor: ROUNDS D; SCOLLAN D; WINSLOW R

Number of Countries: 084 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200046689	A1	20000810	WO 99US2755	A	19990203	200121 B
AU 9926652	A	20000825	AU 9926652	A	19990203	200121
			WO 99US2755	A	19990203	
EP 1149347	A1	20011031	EP 99906830	A	19990203	200172
			WO 99US2755	A	19990203	
JP 2002537008	W	20021105	WO 99US2755	A	19990203	200304
			JP 2000597702	A	19990203	
DE 19983999	T	20030618	DE 1083999	A	19990203	200348
			WO 99US2755	A	19990203	

Priority Applications (No Type Date): WO 99US2755 A 19990203

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200046689	A1	E	46	G06F-017/00	

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 9926652 A Based on patent WO 200046689

EP 1149347 A1 E G06F-017/00 Based on patent WO 200046689

Designated States (Regional): BE CH DK ES FR GB IE IT LI NL SE

JP 2002537008 W 54 A61B-005/05 Based on patent WO 200046689

DE 19983999 T G06F-017/00 Based on patent WO 200046689

18/3/10 (Item 8 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013507822

WPI Acc No: 2000-679766/200066

XRAM Acc No: C00-206838

John Sims EIC 3700 308-4836

Detecting the effectiveness of sterilization treatment, useful for assessing sterilization of equipment such as medical devices, comprises biological indicator e.g. bacterial spore and multiangle light scattering instrument

Patent Assignee: ICF TECHNOLOGIES INC (ICFT-N)

Inventor: FELKNER I C; LAICO J P

Number of Countries: 093 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200066763	A1	20001109	WO 2000US11914	A	20000503	200066 B
AU 200046911	A	20001117	AU 200046911	A	20000503	200111
EP 1173604	A1	20020123	EP 2000928717	A	20000503	200214
			WO 2000US11914	A	20000503	
BR 200010297	A	20020213	BR 200010297	A	20000503	200220
			WO 2000US11914	A	20000503	
US 20020123089	A1	20020905	US 99132186	P	19990503	200260
			US 2000563707	A	20000502	
			US 200116742	A	20011031	
JP 2002542836	W	20021217	JP 2000615785	A	20000503	200312
			WO 2000US11914	A	20000503	
US 20030027242	A1	20030206	US 99132186	P	19990503	200313
			US 2000563707	A	20000502	
			US 200291260	A	20020304	

Priority Applications (No Type Date): US 99132186 P 19990503; US 2000563707 A 20000502; US 200116742 A 20011031; US 200291260 A 20020304

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
WO 200066763	A1	E 81	C12Q-001/22	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW				
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW				
AU 200046911	A		C12Q-001/22	Based on patent WO 200066763
EP 1173604	A1	E	C12Q-001/22	Based on patent WO 200066763
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI				
BR 200010297	A		C12Q-001/22	Based on patent WO 200066763
US 20020123089	A1		C12Q-001/22	Provisional application US 99132186
Div ex application US 2000563707				
JP 2002542836	W	82	C12M-001/34	Based on patent WO 200066763
US 20030027242	A1		C12Q-001/22	Provisional application US 99132186

CIP of application US 2000563707

18/3/11 (Item 9 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013099332

WPI Acc No: 2000-271204/200023

Related WPI Acc No: 2000-271595

XRAM Acc No: C00-082714

Computer-implemented method for predicting a pharmacokinetic property of a target compound in an anatomical segment of a target mammalian system

Patent Assignee: NAVICYTE INC (NAVI-N); GRASS G M (GRAS-I); LEESMAN G D

(LEES-I); NORRIS D A (NORR-I); SINKO P J (SINK-I); WEHRLI J E (WEHR-I);

John Sims EIC 3700 308-4836

LION BIOSCIENCE AG (LION-N)

Inventor: GRASS G M; LEESMAN G D; NORRIS D A; SINKO P J; WEHRLI J E

Number of Countries: 023 Number of Patents: 009

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200015178	A2	20000323	WO 99US21001	A	19990914	200023 B
AU 9962474	A	20000403	AU 9962474	A	19990914	200034
EP 1144675	A2	20011017	EP 99949642	A	19990914	200169
			WO 99US21001	A	19990914	
US 20020010550	A1	20020124	US 98100224	P	19980914	200210
			US 98100290	P	19980914	
			US 98109232	P	19981118	
			US 98109234	P	19981118	
			US 99320544	A	19990526	
US 20020013662	A1	20020131	US 98100224	P	19980914	200210
			US 98100290	P	19980914	
			US 98109232	P	19981118	
			US 98109234	P	19981118	
			US 99320371	A	19990526	
US 20020035459	A1	20020321	US 98100224	P	19980914	200224
			US 98100290	P	19980914	
			US 98109232	P	19981118	
			US 98109234	P	19981118	
			US 99320270	A	19990526	
US 20020061540	A1	20020523	US 98100224	P	19980914	200239
			US 98100290	P	19980914	
			US 98109232	P	19981118	
			US 98109234	P	19981118	
			US 99320069	A	19990526	
			US 2001989533	A	20011121	
JP 2002524809	W	20020806	WO 99US21001	A	19990914	200266
			JP 2000569763	A	19990914	
US 6542858	B1	20030401	US 98100224	P	19980914	200324
			US 98100290	P	19980914	
			US 98109232	P	19981118	
			US 98109234	P	19981118	
			US 99320545	A	19990526	

Priority Applications (No Type Date): US 99320545 A 19990526; US 98100224 P 19980914; US 98100290 P 19980914; US 98109232 P 19981118; US 98109234 P 19981118; US 99320069 A 19990526; US 99320270 A 19990526; US 99320371 A 19990526; US 99320372 A 19990526; US 99320544 A 19990526; US 2001989533 A 20011121

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
WO 200015178	A2	E 207	A61K-000/00	
Designated States (National): AU CA JP US				
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE				
AU 9962474	A			Based on patent WO 200015178
EP 1144675	A2	E	C12Q-001/00	Based on patent WO 200015178
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE				
US 20020010550	A1		G01N-033/48	Provisional application US 98100224
				Provisional application US 98100290
				Provisional application US 98109232
				Provisional application US 98109234
US 20020013662	A1		G01N-033/48	Provisional application US 98100224
				Provisional application US 98100290

US 20020035459 A1 G01N-033/48 Provisional application US 98109232
Provisional application US 98109234
Provisional application US 98100224

US 20020061540 A1 C12Q-001/00 Provisional application US 98100290
Provisional application US 98109232
Provisional application US 98109234
Provisional application US 98100224

JP 2002524809 W 223 G06F-019/00 Provisional application US 98100290
Based on patent WO 200015178
US 6542858 B1 G06N-003/00 Provisional application US 98109232
Provisional application US 98100290
Provisional application US 98109232
Provisional application US 98109234

18/3/12 (Item 10 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

012925573 **Image available**
WPI Acc No: 2000-097409/200008
XRPX Acc No: N00-075271

Communication network modeling method for telephone network, computer network used in business organization, medical application
Patent Assignee: CAMELOT INFORMATION TECHNOLOGIES LTD (CAME-N)
Inventor: BAHRAV Y; SHAPIRA Y
Number of Countries: 087 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9963708	A2	19991209	WO 99IL291	A	19990601	200008 B
AU 9940570	A	19991220	AU 9940570	A	19990601	200021
EP 1084550	A2	20010321	EP 99923843	A	19990601	200117
			WO 99IL291	A	19990601	

Priority Applications (No Type Date): IL 124706 A 19980601
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9963708	A2	E	31	H04L-012/00	
Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
AU 9940570	A			H04L-012/00	Based on patent WO 9963708
EP 1084550	A2	E		H04L-012/24	Based on patent WO 9963708
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					

18/3/13 (Item 11 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

011869598 **Image available**
WPI Acc No: 1998-286508/199825

John Sims EIC 3700 308-4836

XRPX Acc No: N98-225210

Method of determining end systolic pressure volume relationship of human heart - involves monitoring heart for blood pressure of its left ventricular to give pressure signal, with volume to give volume signal and analysing ECG timing signals based on previous determined model normalised elastance function

Patent Assignee: UNIV JOHNS HOPKINS (UYJO); UNIV JOHNS HOPKINS SCHOOL MEDICINE (UYJO)

Inventor: CHEN C; KASS D A; SENZAKI H

Number of Countries: 079 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9819594	A1	19980514	WO 97US19695	A	19971103	199825 B
AU 9854270	A	19980529	AU 9854270	A	19971103	199841
US 6090047	A	20000718	US 9630184	A	19961104	200037
			US 97962847	A	19971103	

Priority Applications (No Type Date): US 9630184 P 19961104; US 97962847 A 19971103

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9819594 A1 E 38 A61B-005/02

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW

Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 9854270 A A61B-005/02 Based on patent WO 9819594

US 6090047 A A61N-005/00 Provisional application US 9630184

18/3/14 (Item 12 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

011614415

WPI Acc No: 1998-031543/199803

XRPX Acc No: N98-025415

Interactive cardiac rhythm simulator for simulating activity of heart - comprises heart model composed of processor controlled state machines to provide electrogram artifact signals and signal processor for composing electrogram waveform from electrogram artifact signals

Patent Assignee: PACESETTER INC (PACE-N)

Inventor: GLASSEL P R; MILLER M D

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5692907	A	19971202	US 95515553	A	19950816	199803 B

Priority Applications (No Type Date): US 95515553 A 19950816

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 5692907 A G09B-023/28

18/3/15 (Item 13 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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John Sims EIC 3700 308-4836

008285551 **Image available**

WPI Acc No: 1990-172552/199023

XRPX Acc No: N90-134196

Computer analysis to determine heart size in chest radiography - has polynomial fitting process to determine heart contour and size

Patent Assignee: ARCH DEVELOPMENT CO (ARCH-N); UNIV CHICAGO (UYCH-N)

Inventor: DOI K; NAKAMORI N

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3938699	A	19900531	DE 3938699	A	19891118	199023 B
US 5072384	A	19911210	US 88275720	A	19881123	199201

Priority Applications (No Type Date): US 88275720 A 19881123

18/3/16 (Item 14 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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007744076

WPI Acc No: 1989-009188/198902

Method of controlling work stations in an automated factory - uses local area network to which is connected work stations using OSI model of ISO norm.

Patent Assignee: BULL SA (SELA)

Inventor: GIMZA J; GIMZA J L

Number of Countries: 005 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 297964	A	19890104	EP 88401627	A	19880627	198902 B
FR 2617623	A	19890106				198909
JP 1026954	A	19890130	JP 88164797	A	19880701	198910
EP 297964	B1	19940810	EP 88401627	A	19880627	199431
DE 3851017	G	19940915	DE 3851017	A	19880627	199436
			EP 88401627	A	19880627	
ES 2061704	T3	19941216	EP 88401627	A	19880627	199505
US 5530857	A	19960625	US 88214065	A	19880630	199631
			US 91666568	A	19910308	
			US 94281988	A	19940729	

Priority Applications (No Type Date): FR 879382 A 19870702

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 297964	A	F	21		
EP 297964	B1	F	17	G06F-013/38	
DE 3851017	G			G06F-013/38	Based on patent EP 297964
ES 2061704	T3			G06F-013/38	Based on patent EP 297964
US 5530857	A		13	G06F-015/16	Cont of application US 88214065
					Cont of application US 91666568

18/3/17 (Item 15 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

007507219 **Image available**

WPI Acc No: 1988-141152/198821

XRPX Acc No: N88-107766

Human testing system for cardio-pulmonary resuscitation - has model of human body which is provided with simulated resuscitation

Patent Assignee: LAERDAL A S A/S (LAER-N); LAERDAL A S A/S (LAER-I)
Inventor: AAMODTH K; EIKELAND H; LAERDAL T
Number of Countries: 002 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3638192	A	19880519	DE 3638192	A	19861108	198821 B
US 4797104	A	19890110	US 8781317	A	19870803	198905
DE 3638192	C	19900927				199039

Priority Applications (No Type Date): DE 3638192 A 19861108

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
DE 3638192	A	18		
US 4797104	A	15		

18/3/18 (Item 16 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

007394572 **Image available**

WPI Acc No: 1988-028507/198804

XRAM Acc No: C88-012609

XRPX Acc No: N88-021512

A fully automated haemodialysis system - is based on patient blood pressure and heart rate and uses a microprocessor to control filtration rate and electrolyte concentration

Patent Assignee: FORD H HOSPITAL (FORD-N)

Inventor: LIPPS B J

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4718891	A	19880112	US 86860083	A	19860506	198804 B

Priority Applications (No Type Date): US 84606707 A 19840503; US 86860083 A 19860506

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 4718891	A	5		

18/3/19 (Item 17 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

007109538

WPI Acc No: 1987-109535/198716

XRPX Acc No: N87-082403

ECG valve representation derived using electrodes - feeds to computer for computing coordinates describing excitation spread which as processed contour lines are fed to heart model

Patent Assignee: KESSLER M (KESS-I)

Inventor: KESSLER M

Number of Countries: 010 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3536658	A	19870416	DE 3536658	A	19851015	198716 B
EP 223049	A	19870527	EP 86114059	A	19861010	198721
US 4898181	A	19900206	US 88262107	A	19881019	199012
EP 223049	B1	19931229	EP 86114059	A	19861010	199401
DE 3689469	G	19940210	DE 3689469	A	19861010	199407

John Sims EIC 3700 308-4836

EP 86114059 A 19861010

Priority Applications (No Type Date): DE 3536658 A 19851015

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

DE 3536658 A 11

EP 223049 A G

Designated States (Regional): AT CH DE FR GB IT LI NL SE

US 4898181 A 12

EP 223049 B1 G 14 A61B-005/04

Designated States (Regional): AT CH DE FR GB IT LI NL SE

DE 3689469 G A61B-005/04 Based on patent EP 223049

18/3/20 (Item 18 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

001453822

WPI Acc No: 1976-B6714X/197608

**Automatic identification of picture object with model - comparing matrix
obtained from scanning with model matrix in computer**

Patent Assignee: PHILIPS PATENTVERWALTUNG GMBH (PHIG)

Number of Countries: 006 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 2437250	A	19760212				197608 B
BE 832008	A	19760202				197608
NL 7508954	A	19760204				197608
SE 7508617	A	19760301				197613
FR 2280937	A	19760402				197621
DE 2437250	B	19780105				197802
GB 1525856	A	19780920				197838

Priority Applications (No Type Date): DE 2437250 A 19740802

?

23/TI/6 (Item 5 from file: 350)
DIALOG(R)File 350:(c) 2003 Thomson Derwent. All rts. reserv.

Surgical instrument manipulating arm and computer control system -
uses three-dimensional data model in computer to assist in
reconciliation of previous surgery and bone transplants
? t s23/3/all

23/3/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2003 JPO & JAPIO. All rts. reserv.

06227788 **Image available**
REAL-TIME POSITIONING SYSTEM

PUB. NO.: 11-169351 [JP 11169351 A]
PUBLISHED: June 29, 1999 (19990629)
INVENTOR(s): VOMLEHN JOHN CHRISTIAN
CARL ALLEN LAWRENCE
KHANUJA HARPAL SINGH
APPLICANT(s): GENERAL ELECTRIC CO <GE>
APPL. NO.: 10-269110 [JP 98269110]
FILED: September 24, 1998 (19980924)
PRIORITY: 944277 [US 944277], US (United States of America), October
06, 1997 (19971006)

23/3/2 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

015195797
WPI Acc No: 2003-256333/200325
XRAM Acc No: C03-066382
XRPX Acc No: N03-203406

Combination of peptides derived from chemotaxis inhibiting protein from
Staphylococcus aureus (CHIPS) having CHIPS activity, useful in
prophylaxis and treatment of inflammation, cardiovascular, skin and
kidney diseases

Patent Assignee: JARI PHARM BV (JARI-N)
Inventor: GOSSELAAR-DE HAAS C J C; KRUIJTZER J A W; VAN KESSEL C P M; VAN
STRIJP J A G

Number of Countries: 096 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200306048	A1	20030123	WO 2001EP8004	A	20010711	200325 B

Priority Applications (No Type Date): WO 2001EP8004 A 20010711

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200306048	A1	E	89	A61K-038/08	
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Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

23/3/3 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

012881563 **Image available**
WPI Acc No: 2000-053397/200004
XRPX Acc No: N00-041564

Interactive computer-assisted surgical system with three-dimensional model display controller

Patent Assignee: ORTHOSOFT INC (ORTH-N)
Inventor: BOIVIN M; BROSSEAU E; HAMEL G; AMIOT L
Number of Countries: 023 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9960939	A1	19991202	WO 99CA495	A	19990527	200004 B
AU 9939245	A	19991213	AU 9939245	A	19990527	200020
EP 1079756	A1	20010307	EP 99922027	A	19990527	200114
			WO 99CA495	A	19990527	
US 6450978	B1	20020917	US 9887089	P	19980528	200264
			US 9887091	P	19980528	
			US 99322398	A	19990528	
US 6533737	B1	20030318	US 9887089	P	19980528	200322
			US 9887091	P	19980528	
			US 99322398	A	19990528	
			US 2000641878	A	20000817	

Priority Applications (No Type Date): US 9887091 P 19980528; US 9887089 P 19980528; US 99322398 A 19990528; US 2000641878 A 20000817

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
WO 9960939	A1 E	35	A61B-019/00	
			Designated States (National): AU CA JP	
			Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE	
AU 9939245	A		A61B-019/00	Based on patent WO 9960939
EP 1079756	A1 E		A61B-019/00	Based on patent WO 9960939
			Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE	
US 6450978	B1		A61B-005/00	Provisional application US 9887089 Provisional application US 9887091
US 6533737	B1		A61B-005/00	Provisional application US 9887089 Provisional application US 9887091 Div ex application US 99322398

23/3/4 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

012439877 **Image available**
WPI Acc No: 1999-245985/199921
XRPX Acc No: N99-183198

Computer-constructed surgical guide

Patent Assignee: GENERAL ELECTRIC CO (GENE)
Inventor: CARL A L; VOMLEHN J C; VOSBURGH K G
Number of Countries: 026 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 908836	A2	19990414	EP 98308141	A	19981006	199921 B
JP 11178837	A	19990706	JP 98279230	A	19981001	199937

Priority Applications (No Type Date): US 97944275 A 19971006

John Sims EIC 3700 308-4836

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes
EP 908836 A2 E 6 G06F-019/00
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI
JP 11178837 A 5 A61B-017/58

23/3/5 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

012439821 **Image available**

WPI Acc No: 1999-245929/199921

XRPX Acc No: N99-183151

Interactive real-time, optimum positioning system for surgical instrument insertion

Patent Assignee: GENERAL ELECTRIC CO (GENE)

Inventor: CARL A L; KHANUJA H S; VOMLEHN J C

Number of Countries: 027 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 908146	A2	19990414	EP 98308131	A	19981006	199921 B
JP 11169351	A	19990629	JP 98269110	A	19980924	199936
US 5978696	A	19991102	US 97944277	A	19971006	199953

Priority Applications (No Type Date): US 97944277 A 19971006

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes
EP 908146 A2 E 6 A61B-017/17
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI
JP 11169351 A 6 A61B-005/00
US 5978696 A A61B-005/00

23/3/6 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

009988419 **Image available**

WPI Acc No: 1994-256130/199432

XRPX Acc No: N94-201804

Surgical instrument manipulating arm and computer control system - uses three-dimensional data model in computer to assist in reconciliation of previous surgery and bone transplants

Patent Assignee: MDC MEDICAL DIAGNOSTIC COMPUTING GMBH (MDCM-N); KLIEGIS U (KLIE-I); KLIEGIS U G (KLIE-I)

Inventor: KLIEGIS U G; KLIEGIS U

Number of Countries: 019 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 4304570	A1	19940818	DE 4304570	A	19930216	199432 B
WO 9418899	A1	19940901	WO 94DE156	A	19940215	199436
EP 684795	A1	19951206	EP 94906872	A	19940215	199602
			WO 94DE156	A	19940215	
JP 8508656	W	19960917	JP 94518545	A	19940215	199704
			WO 94DE156	A	19940215	
US 5769078	A	19980623	WO 94DE156	A	19940215	199832
			US 95501045	A	19950816	
EP 684795	B1	20000105	EP 94906872	A	19940215	200006

			WO 94DE156	A	19940215	
DE 59409615	G	20010125	DE 509615	A	19940215	200107
			EP 94906872	A	19940215	
			WO 94DE156	A	19940215	

Priority Applications (No Type Date): DE 4304570 A 19930216

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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DE 4304570	A1		5	A61B-019/00	
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WO 9418899	A1 G		16	A61B-019/00	
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Designated States (National): JP US

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

EP 684795	A1 G		5	A61B-019/00	Based on patent WO 9418899
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Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

JP 8508656	W		13	A61B-019/00	Based on patent WO 9418899
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US 5769078	A			A61B-017/00	Based on patent WO 9418899
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EP 684795	B1 G			A61B-019/00	Based on patent WO 9418899
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Designated States (Regional): CH DE FR GB LI

DE 59409615	G			A61B-019/00	Based on patent EP 684795
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Based on patent WO 9418899

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13/3/1

DIALOG(R) File 348:EUROPEAN PATENTS

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01129401

INTERVENTIONAL RADIOLOGY INTERFACE APPARATUS AND METHOD

DISPOSITIF D'INTERFACE EN RADIOLOGIE EXPLORATRICE ET PROCEDE

PATENT ASSIGNEE:

HT Medical Systems, Inc., (2686170), Suite 902, 6001 Montrose Road,
Rockville, MD 20852, (US), (Applicant designated States: all)

INVENTOR:

MEGLAN, Dwight, A., 6 Hutchins Circle, Lynnfield, MA 01940, (US)

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MERRIL, Gregory, L. , 4822 Leland Street, Chevy Chase, MD 20815, (US)

PATENT (CC, No, Kind, Date):

WO 9810387 980312

APPLICATION (CC, No, Date): WO 97940798 970904; WO 97US15552 970904

PRIORITY (CC, No, Date): US 25433 P 960904

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU;
MC; NL; PT; SE

INTERNATIONAL PATENT CLASS: G08B-001/00

LANGUAGE (Publication,Procedural,Application): English; English; English

13/3/2

DIALOG(R) File 348:EUROPEAN PATENTS

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01077797

**INTERFACE DEVICE AND METHOD FOR INTERFACING INSTRUMENTS TO VASCULAR ACCESS
SIMULATION SYSTEMS**

SCHNITTSTELLE FUR SIMULATOR FUR VASKULARE VORRICHTUNG

**DISPOSITIF ET PROCEDE D'INTERFA AGE D'INSTRUMENTS AVEC DES SYSTEMES DE
SIMULATION D'ACCES VASCULAIRE**

PATENT ASSIGNEE:

HT Medical Systems, Inc., (2686170), Suite 902, 6001 Montrose Road,
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Haley, Stephen (79721), Gill Jennings & Every, Broadgate House, 7 Eldon
Street, London EC2M 7LH, (GB)

PATENT (CC, No, Kind, Date): EP 1051698 A2 001115 (Basic)

WO 9939315 990805

APPLICATION (CC, No, Date): EP 99904380 990128; WO 99US1822 990128

PRIORITY (CC, No, Date): US 72809 980128

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE

INTERNATIONAL PATENT CLASS: G09B-023/28

NOTE:

No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; English

13/3/3

DIALOG(R) File 348:EUROPEAN PATENTS

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01077468

**INTERFACE DEVICE AND METHOD FOR INTERFACING INSTRUMENTS TO MEDICAL
PROCEDURE SIMULATION SYSTEM**

**INSTRUMENTENSCHNITTSTELLE UND SIMULATIONSMETHODE FÜR MEDIZINISCHE VERFAHREN
PROCEDE ET DISPOSITIF D'INTERFACE ENTRE DES INSTRUMENTS ET UN SYSTEME DE
SIMULATION DE PROCEDURE MEDICALE**

PATENT ASSIGNEE:

HT Medical Systems, Inc., (2686171), 55 W. Watkins Mill Road,
Gaithersburg, MD 20878, (US), (Applicant designated States: all)

INVENTOR:

ALEXANDER, David, 15938 Woodgrove Road, Purcellville, VA 20132, (US)
BROWN, J., Michael, 1759-1/2 R Street, N.W. 200, Washington, DC 20009,
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TURCHI, Mario, 275 Leonia Avenue, Leonia, NJ 07605, (US)

LEGAL REPRESENTATIVE:

Haley, Stephen (79721), Gill Jennings & Every, Broadgate House, 7 Eldon
Street, London EC2M 7LH, (GB)

PATENT (CC, No, Kind, Date): EP 1103041 A1 010530 (Basic)

WO 9939317 990805

APPLICATION (CC, No, Date): EP 99902444 990127; WO 99US1664 990127

PRIORITY (CC, No, Date): US 72672 P 980128; US 105661 P 981026; US 116545 P
990121

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE

INTERNATIONAL PATENT CLASS: G09B-023/28

NOTE:

No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; English
?

19/3/2

DIALOG(R)File 348:EUROPEAN PATENTS

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01011184

Computer-constructed surgical guide

Rechner-konstruierte chirurgisches Lehre

Guide chirurgical construit par ordinateur

PATENT ASSIGNEE:

GENERAL ELECTRIC COMPANY, (203903), 1 River Road, Schenectady, NY 12345,

(US), (Applicant designated States: all)

INVENTOR:

Vomlehn, John Christian, 218 Spring Road, Scotia, New York 12302, (US)

Vosburgh, Kirby Gannett, 900 Saint Davids Lane, Schenectady, New York
12309, (US)

Carl, Allen Lawrence, 308 Highgate Drive, Slingerlands, New York 12159,
(US)

LEGAL REPRESENTATIVE:

Goode, Ian Roy (31098), London Patent Operation General Electric

International, Inc. Essex House 12-13 Essex Street, London WC2R 3AA,
(GB)

PATENT (CC, No, Kind, Date): EP 908836 A2 990414 (Basic)

EP 908836 A3 991201

APPLICATION (CC, No, Date): EP 98308141 981006;

PRIORITY (CC, No, Date): US 944275 971006

DESIGNATED STATES: DE; NL

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G06F-019/00; A61B-017/17

ABSTRACT WORD COUNT: 205

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
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CLAIMS A	(English)	9915	456
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SPEC A	(English)	9915	1666
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Total word count - document A	2122
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Total word count - document B	0
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Total word count - documents A + B	2122
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19/3/5

DIALOG(R)File 348:EUROPEAN PATENTS

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00581164

SURGICAL OPERATION DEVICE

CHIRURGISCHE OPERATIONSVORRICHTUNG

DISPOSITIF POUR INTERVENTIONS CHIRURGICALES

PATENT ASSIGNEE:

ONESYS OY, (1742580), Kiviharjuntie 11, 90220 Oulu, (FI), (applicant
designated states: DE;FR;GB)

INVENTOR:

ONESYS OY, Kiviharjuntie 11, 90220 Oulu, (FI)

LEGAL REPRESENTATIVE:

Silverman, Warren et al (35861), Haseltine Lake & Co. Imperial House,
15-19 Kingsway, London WC2B 6UD, (GB)

PATENT (CC, No, Kind, Date): EP 586464 A1 940316 (Basic)

EP 586464 B1 980812

WO 9220295 921126

John Sims EIC 3700 308-4836

APPLICATION (CC, No, Date): EP 92910792 920522; WO 92FI162 920522

PRIORITY (CC, No, Date): FI 912520 910524

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS: A61B-019/00;

NOTE:

No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; Finnish

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9833	346
CLAIMS B	(German)	9833	339
CLAIMS B	(French)	9833	358
SPEC B	(English)	9833	3205
Total word count - document A			0
Total word count - document B			4248
Total word count - documents A + B			4248
?			

23/3,AB/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6682965 INSPEC Abstract Number: C2000-10-5540B-001

Title: On plane shape perception by displacement with a point-contact type force feedback device

Author(s): Yamashita, J.; Fukui, Y.; Morikawa, O.; Sato, S.

Author Affiliation: AIST, Nat. Inst. of Biosci. & Human Technol., Japan

Journal: Transactions of the Information Processing Society of Japan
vol.41, no.5 p.1298-307

Publisher: Inf. Process. Soc. Japan,

Publication Date: May 2000 Country of Publication: Japan

CODEN: JSGRD5 ISSN: 0387-5806

SICI: 0387-5806(200005)41:5L:1298:PSPD;1-L

Material Identity Number: T205-2000-007

Language: Japanese

Abstract: **Haptic** /force feedback device is an important type of three-dimensional **haptic** display whose application fields include **computer aided design** and **surgical simulation**. With such a device, three elements of feedback force (magnitude, direction, and displacement) can be controlled independently to give **haptic** illusion as well as natural **haptic simulation** of virtual objects. To date, however, shape perception factors have not been well studied. This paper presents experiments on the effect of displacement in plane shape perception with a point contact type force feedback device. The subjects changed the height h of smooth mountainous stimulus shape (width 2ω and stiffness s) to determine parameters and their thresholds for the shape perceived as flat. The feedback force direction was fixed upward, the same as a horizontal plane, to see the effect of displacement. A shape is felt to be flat (1) if its height is smaller than absolute threshold value $h_{\text{sub at}} = 0.034 \cdot \omega + 0.022$ (where s is 0.25-0.5 N/mm and ω is 20-40 mm), or (2) if force for its height h , calculated by $h \cdot s$, is smaller than 0.18 N (where s is 0.25-0.5 N/mm and ω is 5-20 mm).

Subfile: C

Copyright 2000, IEE

23/3,AB/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6476018 INSPEC Abstract Number: A2000-04-8745-056, C2000-02-7330-398

Title: Biomechanic-based simulation of knee dynamics

Author(s): Keeve, E.; Kikinis, R.

Author Affiliation: Harvard Med. Sch., Brigham & Women's Hosp., Boston, MA, USA

Conference Title: Proceedings of the First Joint BMES/EMBS Conference. 1999 IEEE Engineering in Medicine and Biology 21st Annual Conference and the 1999 Annual Fall Meeting of the Biomedical Engineering Society (Cat. No.99CH37015) Part vol.1 p.558 vol.1

Publisher: IEEE, Piscataway, NJ, USA

Publication Date: 1999 Country of Publication: USA 2 vol. vi+1345 pp.

ISBN: 0 7803 5674 8 Material Identity Number: XX-1999-03127

U.S. Copyright Clearance Center Code: 0 7803 5674 8/99/\$10.00

Conference Title: Proceedings of the First Joint BMES/EMBS Conference

Conference Sponsor: Medtronic; Johnson & Johnson; Baxter Cardio Vascular Group; Becton Dickinson & Co.; Georgia Biomed. Partnership; Guidant Found.; Kilpatrick Stockton LLP; King & Spaulding; Troutman Sanders LLP; Adv. Tissue Sci.; AVL Biosense Corp.; CUH2A; Ernst & Young LLP; State of Georgia

; Dept. Ind.; Trade & Tourism; Healthdyne Companies; Long Aldrige & Norman; Porex Corp.; Sulzer Innotec; Turner Constr. Company

Conference Date: 13-16 Oct. 1999 Conference Location: Atlanta, GA, USA
Language: English

Abstract: **Computer** -based biomechanical **modeling** and **simulation** of human organs and their functionality have made a great impact on the field of medicine in the last decade. In this paper we will focus on modeling and **simulating** the kinematics of the human knee joint. Three-dimensional models of a knee are generated from magnetic resonance acquisitions at varying flexion angles. They include more than 40 different anatomical structures like the femur, tibia, patella, ligaments, menisci and muscles. Using collision detection algorithms, deformable models as well as force-feedback devices, the kinematics of the knee joint are **simulated**.

Subfile: A C

Copyright 2000, IEE

23/3,AB/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

5944823 INSPEC Abstract Number: C9807-7330-288

Title: Proceedings of Medicine Meets Virtual Reality IV: Healthcare in the Information Age - Feature Tools for Transforming Medicine

Editor(s): Weghorst, S.J.; Sieburg, H.B.; Morgan, K.S.

Publisher: IOS Press, Amsterdam, Netherlands

Publication Date: 1996 Country of Publication: Netherlands xvi+734 pp.

ISBN: 90 5199 250 5 Material Identity Number: XX96-00632

Conference Title: Proceedings of Medicine Meets Virtual Reality IV: Healthcare in the Information Age - Feature Tools for Transforming Medicine
Conference Date: 17-20 Jan. 1996 Conference Location: San Diego, CA, USA

Language: English

Abstract: The following topics were dealt with: augmented reality; **surgery**; patient therapy; data visualization; digital **simulation**; data fusion; biomedical imaging and image processing; health care; medical information systems; training systems; telepresence; user interfaces; planning; **CAD**; endoscopy; echography; patient diagnosis; biomedical education; networked systems; telemedicine; patient care; emergency aid; teleconferencing; the Visible Human project; **haptic** systems; dentistry; patient anatomy; holography; robots; telecontrol; display techniques; human factors; intelligent systems; sensors; and Internet applications.

Subfile: C

Copyright 1998, IEE

23/3,AB/4 (Item 4 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

5147138 INSPEC Abstract Number: A9603-8770G-009, B9602-7520-009, C9602-3385-006

Title: Ophthalmic microsurgical robot and surgical simulator

Author(s): Hunter, I.; Jones, L.; Doukoglou, T.; Lafontaine, S.; Hunter, P.; Sagar, M.

Author Affiliation: Dept. of Mech. Eng., MIT, Cambridge, MA, USA

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA)
vol.2351 p.184-90

Publisher: SPIE-Int. Soc. Opt. Eng,
Publication Date: 1994 Country of Publication: USA
CODEN: PSISDG ISSN: 0277-786X
SICI: 0277-786X(1994)2351L:184:OMRS;1-G
Material Identity Number: C574-95033
U.S. Copyright Clearance Center Code: 0 8194 1686 X/94/\$6.00
Conference Title: Telemanipulator and Telepresence Technologies
Conference Sponsor: SPIE; IEEE NCC
Conference Date: 31 Oct.-1 Nov. 1994 Conference Location: Boston, MA,
USA

Language: English

Abstract: A teleoperated microsurgical robot has been developed together with a virtual environment for microsurgery on the eye. Visual and mechanical information is relayed via bidirectional pathways between the slave and master of the microsurgical robot. The system permits surgeons to operate in one of three alternative modes: on real tissue; on physically **simulated** tissue in a mannequin, or on a **computer** based physical **model** contained within the ophthalmic virtual environment. In all three modalities, forces generated during tissue manipulation (i.e. resecting, probing) are fed back to the surgeon via a force reflecting interface to give the **haptic** sensations (i.e. "feel") appropriate to the actions being performed. The microsurgical robot has been **designed** so that the master and slave systems can be in physically separate environments which permits remote **surgery** to be performed. The system attempts to create an immersive environment for the operator by including not only visual and **haptic** feedback, but also auditory, cutaneous and ultimately, olfactory sensations.

Subfile: A B C

Copyright 1996, IEE

23/3,AB/5 (Item 1 from file: 6)
DIALOG(R)File 6:NTIS
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1915622 NTIS Accession Number: AD-A297 231/3

Haptic **Interface for Virtual Reality** Simulation and Training. Phase 1
(Final technical rept. 1 Nov 94-30 Apr 95)

Rosenberg, L. B. ; Lacey, T. A. ; Stredney, D.

Immersion Human Interface Corp., San Jose, CA.

Corp. Source Codes: 111438000; 429727

Report No.: AFOSR-TR-95-0482

30 Jun 95 78p

Languages: English

Journal Announcement: GRAI9602

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NTIS Prices: PC A05/MF A01

Advances in graphic display technologies have made virtual reality (VR) and scientific visualization applications accessible to a wide user population. Unfortunately, few human interface tools exist to allow users to interact naturally with these powerful graphical environments. To address this need, Immersion Corporation has developed a user interface mechanism to allow natural manual interaction with 3-D environments which provides realistic force feedback to the user. This haptic display methodology combines high fidelity, low cost, and inherent safety to allow force reflection technology to become commercially feasible. The long term objective is to produce a 3-D **haptic** interface for virtual environments.

Phase 1 focused on producing one-dimensional **haptic** interface hardware and incorporating this technology into a real world VR application. Immersion and the Ohio Supercomputer Center have worked together to produce a virtual **simulation** of epidural analgesia, a medical procedure that requires delicate needle insertions into the spinal column. The resulting VR **simulation** is so realistic in look and feel, it can actually be used as a training environment to teach doctors to perform the dexterous manual procedure, allowing them to learn manual technique and explore the associated physical sensations without the risks or costs associated with using real biological specimens. (AN).

23/3,AB/6 (Item 1 from file: 8)
DIALOG(R)File 8: Ei Compendex(R)
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05437636

E.I. No: EIP99124941762

Title: Cobots

Author: Peshkin, Michael; Colgate, F. Edward

Corporate Source: Northwestern Univ, Evanston, IL, USA

Source: Industrial Robot v 26 n 5 1999. p 335-341

Publication Year: 1999

CODEN: IDRBAT ISSN: 0143-991X

Language: English

Abstract: Collaborative robots - 'cobots' - are intended for direct interaction with a human worker, handling a shared payload. They are marked departure from autonomous industrial robots which must be isolated from people for safety reasons. Cobots are also distinct from teleoperators, in which a human operator controls a robot and payload remotely. Cobots interact with people by producing software-defined 'virtual surfaces' which constrain and guide the motion of the shared payload, but add little or no power. Ergonomic as well as productivity benefits result from combining the strength and computer-interface of the cobot with the sensing and dexterity of the human worker. This paper explains cobots as one approach to an emerging class of materials handling equipment called Intelligent Assist Devices (IADs). We describe two cobots of this class presently in industrial testbed settings. Future applications of cobots virtual surfaces are tool guidance in image guided **surgery**, and **haptic** display in which the surfaces of a **CAD** model can be felt. (Author abstract) 7 Refs.

23/3,AB/7 (Item 2 from file: 8)
DIALOG(R)File 8: Ei Compendex(R)
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04622046

E.I. No: EIP97023517501

Title: User requirements when interacting with virtual objects

Author: Meech, J.F.; Solomonides, A.E.

Corporate Source: Interface Technology Research Ltd, Bristol, UK

Conference Title: Proceedings of the IEE Colloquium on Virtual Reality - User Issues

Conference Location: London, UK Conference Date: 19960325

E.I. Conference No.: 45941

Source: IEE Colloquium (Digest) n 068 1996. 3p

Publication Year: 1996

CODEN: DCILDN ISSN: 0963-3308

Language: English

Abstract: Many industrial applications of virtual reality will benefit

from the introduction of manipulation in the virtual environment. Applications in **computer aided design** and manufacturing (**CAD /CAM**), **design** prototyping and production evaluation will be enhanced by allowing users to manipulate virtual objects before manufacturing them. In addition, training **simulators** for **surgical** training, operation of control panels, and working in hostile environments will benefit from such a capability. Some devices which provide tactile feedback are currently being developed to enable the **simulation** of physical contact with a virtual object. Researchers are ensuring that such devices will not create constraints and sensory effects that will get in the way of the users. 3 Refs.

23/3,AB/8 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE
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07407891 EMBASE No: 1998318014
Simulation of endoscopic surgery
Ayache N.; Cotin S.; Delingette H.; Cibmen J.-M.; Russier Y.; Mauescaux J.
N. Ayache, Projet Epidaure, INRIA Sophia Antipolis, 2004 route des Lucioles - BP 93, F-06902 Sophia Antipolis Cedex France
Minimally Invasive Therapy and Allied Technologies (MINIMALLY INVASIVE THER. ALLIED TECHNOL.) (United Kingdom) 1998, 7/2 (71-77)
CODEN: MITAF ISSN: 1364-5706
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 19

This paper describes preliminary work on virtual reality technology applied to liver **surgery** and proposes several enhancements leading towards realistic **surgical simulation**. We have built a realistic model of the liver, including the capsule and the four internal arborescences, from a complete set of slice images. A linear elastic biomechanical model was computed using a finite elements method (FEM). This task was performed off-line, by pre-computing all possible deformations and force reactions. This approach allows real-time interaction during the **simulation**. The user interaction is effected by a set of mechanical devices, representing laparoscopic instruments. This **haptic** interface allows the surgeon to feel the contact forces exerted by the virtual deformable liver-model. The main medical applications of the **simulator** are in **surgical** planning, teaching and training. The combination of **surgical** planning and **simulation** will lead to improved intervention efficiency and optimal care delivery.

23/3,AB/9 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.

09147826 20449784 PMID: 10994331
[A 3-D capsular bag model for describing biomechanical properties of neu intraocular lenses]
Ein 3-D-Kapselsackmodell zur Beschreibung der biomechanischen Eigenschaften neuer Kunstlinsentypen.
Beck R; Pfeiffer K; Stave J; Guthoff R
Universitäts-Augenklinik Rostock.
Der Ophthalmologe - Zeitschrift der Deutschen Ophthalmologischen Gesellschaft (GERMANY) Aug 2000, 97 (8) p546-51, ISSN 0941-293X
Journal Code: 9206148

Document type: Journal Article ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: Completed

BACKGROUND: This study quantified the geometric deformation of the capsular bag following implantation of various intraocular lenses (IOL) using a three-dimensional capsular bag model made of silicone caoutchouc. **METHODS:** After implantation of 13 different IOLs (polymethylmethacrylate, silicone acrygel) into the artificial bag, the induced capsular bag deformation was measured and analyzed. The posterior space between IOL and capsule was examined by ultrasonographic biomicroscopy. **RESULTS:** Polymethylmethacrylate IOLs with C- **haptic design** induced a greater deformation of the capsular bag than silicone lenses; however, both types showed a larger gap posterior to the IOL than acrygel lenses. Acrygel IOLs with different **haptic design** revealed only minimal deformation with close contact posteriorly. **CONCLUSIONS:** The presented three-dimensional model **simulates** the biomechanical and geometrical parameters of the vital capsular bag. Further investigations may determine a correlation of close posterior IOL contact and lens epithelial cell progression.

23/3,AB/10 (Item 2 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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08827096 20110678 PMID: 10646758

Volumetric object modeling for surgical simulation .

Gibson S; Fyock C; Grimson E; Kanade T; Kikinis R; Lauer H; McKenzie N; Mor A; Nakajima S; Ohkami H; Osborne R; Samosky J; Sawada A

MERL, Cambridge, MA 02139, USA. gibson@merl.com

Medical image analysis (ENGLAND) Jun 1998 , 2 (2) p121-32, ISSN 1361-8415 Journal Code: 9713490

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Surgical simulation has many applications in medical education, **surgical** training, **surgical** planning and intra-operative assistance. However, extending current surface-based **computer** graphics methods to **model** phenomena such as the deformation, cutting, tearing or repairing of soft tissues poses significant challenges for real-time interactions. This paper discusses the use of volumetric methods for modeling complex anatomy and tissue interactions. New techniques are introduced that use volumetric methods for modeling soft-tissue deformation and tissue cutting at interactive rates. An initial prototype for **simulating** arthroscopic knee **surgery** is described which uses volumetric models of the knee derived from 3-D magnetic resonance imaging, visual feedback via real-time volume and polygon rendering, and **haptic** feedback provided by a force-feedback device.

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24/3/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

7205492 INSPEC Abstract Number: C2002-04-7460-056

Title: Multimedia environment in complex aerospace engineering

Author(s): Dureigne, M.

Author Affiliation: EADS - Centre Commun de Recherche Louis Bleriot, Suresnes, France

Conference Title: Proceedings 10th IEEE International Workshop on Robot and Human Interactive Communication. ROMAN 2001 (Cat. No.01TH8591) p. 390-5

Publisher: IEEE, Piscataway, NJ, USA

Publication Date: 2001 Country of Publication: USA 660 pp.

ISBN: 0 7803 7222 0 Material Identity Number: XX-2002-00245

U.S. Copyright Clearance Center Code: 0-7803-7222-0/01/\$10.00

Conference Title: Proceedings 10th IEEE International Workshop on Robot and Human Interactive Communication. ROMAN 2001

Conference Sponsor: IEEE Ind. Electron. Soc.; Robotics Soc. Japan; Virtual Reality Soc. Japan; New Technol. Found.; French Embassy in Japan; Astrium (Germany); DaimlerChrysler (G); GPS (G); KUKA (G); Propack Data (G); Siemens (G); Sony Corp. (J); Z+F (G)

Conference Date: 18-21 Sept. 2001 Conference Location: Bordeaux, Paris, France

Language: English

Subfile: C

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24/3/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

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7181746 INSPEC Abstract Number: C2002-03-3390T-011

Title: Design and analysis of a 2-D haptic interface device in virtual reality

Author(s): Ming-Guo Her; Karkoub, M.; Kuei-Shu Hsu

Author Affiliation: Dept. of Mech. Eng., Tatung Univ., Taipei, Taiwan

Journal: International Journal of Computer Applications in Technology vol.15, no.1-3 p.60-9

Publisher: Inderscience Enterprises,

Publication Date: 2001 Country of Publication: Switzerland

CODEN: IJCTEK ISSN: 0952-8091

SICI: 0952-8091(2001)15:1/3L:60:DAHI;1-E

Material Identity Number: M593-2002-001

U.S. Copyright Clearance Center Code: 0952-8091/01/\$10.00+.50

Language: English

Subfile: C

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24/3/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

7076134 INSPEC Abstract Number: C2001-12-6130V-009

Title: A tangible AR desktop environment

Author(s): Regenbrecht, H.; Baratoff, G.; Wagner, M.

Author Affiliation: Virtual Reality Competence Center, DaimlerChrysler AG, Ulm, Germany

Journal: Computers & Graphics vol.25, no.5 p.755-63

John Sims EIC 3700 308-4836

Publisher: Elsevier,
Publication Date: Oct. 2001 Country of Publication: UK
CODEN: COGRD2 ISSN: 0097-8493
SICI: 0097-8493(200110)25:5L:755:TDE;1-Y
Material Identity Number: C186-2001-005
U.S. Copyright Clearance Center Code: 0097-8493/01/\$20.00
Language: English
Subfile: C
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24/3/4 (Item 4 from file: 2)
DIALOG(R)File 2:INSPEC
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

7031583 INSPEC Abstract Number: C2001-10-7400-024
Title: Building on diversity: crafting a paradigm for digital design environments
Author(s): McLundie, M.
Author Affiliation: Glasgow Sch. of Art, UK
Journal: Digital Creativity vol.12, no.2 p.109-11
Publisher: Swets & Zeitlinger,
Publication Date: 2001 Country of Publication: Netherlands
CODEN: DICRFL ISSN: 1462-6268
SICI: 1462-6268(2001)12:2L:109:BDGP;1-S
Material Identity Number: H103-2001-003
U.S. Copyright Clearance Center Code: 1462-6268/2001/1202-0109\$16.00
Language: English
Subfile: C
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24/3/5 (Item 5 from file: 2)
DIALOG(R)File 2:INSPEC
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

7029030 INSPEC Abstract Number: C2001-10-7440-046
Title: A VRML interface for a knowledge-based structural design system
Author(s): Wang, J.; Wang, Y.
Author Affiliation: Dept. of Civil Eng., Tamkang Univ., Tamsui, Taiwan
Conference Title: Proceedings Fifth International Conference on Information Visualisation p.601-5
Editor(s): Banissi, E.; Khosrowshahi, F.; Sarfraz, M.; Ursyn, A.
Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA
Publication Date: 2001 Country of Publication: USA xxiv+769 pp.
ISBN: 0 7695 1195 3 Material Identity Number: XX-2001-01684
U.S. Copyright Clearance Center Code: 0 7695 1195 3/2001/\$10.00
Conference Title: Proceedings Fifth International Conference on Information Visualisation
Conference Date: 25-27 July 2001 Conference Location: London, UK
Language: English
Subfile: C
Copyright 2001, IEE

24/3/6 (Item 6 from file: 2)
DIALOG(R)File 2:INSPEC
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6935574 INSPEC Abstract Number: C2001-07-7480-007
Title: Design and formation system of three-dimensional structure using

John Sims EIC 3700 308-4836

virtual reality - concept and trial development of the system

Author(s): Hirose, S.; Mori, K.; Mun, R.; Lee, Y.; Kanou, Y.
Author Affiliation: Mech. Eng. Lab., Agency of Ind. Sci. & Technol.,
Ibaraki, Japan
Journal: Journal of Mechanical Engineering Laboratory vol.54, no.4
p.35-42
Publisher: Mech. Eng. Lab,
Publication Date: July 2000 Country of Publication: Japan
CODEN: KGKSBL ISSN: 0388-4252
SICI: 0388-4252(200007)54:4L:35:DFST;1-9
Material Identity Number: J174-2001-001
Language: Japanese
Subfile: C
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24/3/7 (Item 7 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6875290 INSPEC Abstract Number: C2001-05-6130B-002

Title: A novel haptics -based interface and sculpting system for physics-based geometric design

Author(s): Dachille, F., IX; Qin, H.; Kaufman, A.
Author Affiliation: Dept. of Comput. Sci., State Univ. of New York, Stony
Brook, NY, USA
Journal: Computer Aided Design vol.33, no.5 p.403-20
Publisher: Elsevier,
Publication Date: 17 April 2001 Country of Publication: UK
CODEN: CAIDA5 ISSN: 0010-4485
SICI: 0010-4485(20010417)33:5L:403:NHBI;1-P
Material Identity Number: C090-2001-004
U.S. Copyright Clearance Center Code: 0010-4485/2001/\$20.00
Language: English
Subfile: C
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24/3/8 (Item 8 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6866160 INSPEC Abstract Number: C2001-04-3390T-030

Title: Development of a force reflection master manipulator and graphic simulator

Author(s): Hyokjo Kwon; Sangduk Jung; Chaeyoun Oh; Kiho Kim; Jangjin Park
Author Affiliation: Graduate Sch., Chonbuk Nat. Univ., Chonju, South
Korea
Conference Title: Proceedings of the IASTED International Conference
Intelligent Systems and Control p.404-9
Editor(s): Hamza, M.H.
Publisher: IASTED/ACTA Press, Anaheim, CA, USA
Publication Date: 2000 Country of Publication: USA iv+432 pp.
ISBN: 0 88986 296 6 Material Identity Number: XX-2000-02158
Conference Title: Proceedings of 2000 Conference on Intelligent Systems
and Control (SC 2000)
Conference Sponsor: IASTED; IASTED Tech. Committee on Control
Conference Date: 14-16 Aug. 2000 Conference Location: Honolulu, HI,
USA
Language: English
Subfile: C

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24/3/9 (Item 9 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6857158 INSPEC Abstract Number: A2001-07-0630C-013, B2001-04-7320C-015, C2001-04-7410H-009

Title: System for acquisition of three-dimensional shape and movement using digital Light-in-Flight holography

Author(s): Carlsson, T.E.; Nilsson, B.; Gustafsson, J.

Author Affiliation: Dept. of Production Eng., R. Inst. of Technol., Stockholm, Sweden

Journal: Optical Engineering vol.40, no.1 p.67-75

Publisher: SPIE,

Publication Date: Jan. 2001 Country of Publication: USA

CODEN: OPEGAR ISSN: 0091-3286

SICI: 0091-3286(200101)40:1L:67:SATD;1-U

Material Identity Number: 0036-2001-001

U.S. Copyright Clearance Center Code: 0091-3286/2001/\$15.00

Language: English

Subfile: A B C

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24/3/10 (Item 10 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6853485 INSPEC Abstract Number: C2001-04-7820-008

Title: Le Musee des Formes Pures [The Museum of Pure Form]

Author(s): Bergamasco, M.

Author Affiliation: PERCRO, Scuola Superiore S.Anna, Pisa, Italy

Conference Title: 8th IEEE International Workshop on Robot and Human Interaction. RO-MAN '99 (Cat. No.99TH8483) p.XXI-XXIII

Publisher: IEEE, Piscataway, NJ, USA

Publication Date: 1999 Country of Publication: USA xxix+430 pp.

ISBN: 0 7803 5841 4 Material Identity Number: XX-2001-00005

U.S. Copyright Clearance Center Code: 0 7803 5841 4/99/\$10.00

Conference Title: 8th IEEE International Workshop on Robot and Human Interaction. RO-MAN '99

Conference Sponsor: Scuola Superiore S.Anna; Robotics Soc. Japan; IEEE Ind. Electron. Soc.; IEEE Robotics & Autom. Soc.; Soc. Instrum. & Control Eng.; New Technol. Found

Conference Date: 27-29.Sept. 1999 Conference Location: Pisa, Italy

Language: English

Subfile: C

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24/3/11 (Item 11 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6684525 INSPEC Abstract Number: C2000-10-7480-014

Title: Dexterous modeling device for industrial design

Author(s): Kameyama, K.

Author Affiliation: Res. & Dev. Center, Toshiba Corp., Kawasaki, Japan

Conference Title: Human-Computer Interaction: Ergonomics and User Interfaces. Proceedings of HCI International '99 (8th International

Conference on Human-Computer Interaction) Part vol.2 p.1035-9 vol.2
Editor(s): Bullinger, H.-J.; Ziegler, J.
Publisher: Lawrence Erlbaum Associates, Mahwah, NJ, USA
Publication Date: 1999 Country of Publication: USA 2
vol.(xxx+1356+1355) pp.
ISBN: 0 8058 3391 9 Material Identity Number: XX-2000-01659
Conference Title: Proceedings of 8th International Conference on Human
Computer Interaction and Special Session on Intelligent Tutoring and
Learning Environments
Conference Date: 22-26 Aug. 1999 Conference Location: Munich, Germany
Language: English
Subfile: C
Copyright 2000, IEE

24/3/12 (Item 12 from file: 2)
DIALOG(R)File 2:INSPEC
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6656450 INSPEC Abstract Number: C2000-09-6180-016
Title: Haptic sculpting of dynamic surfaces
Author(s): Dachille, F.; Qin, H.; Kaufman, A.; El-Sana, J.
Author Affiliation: Dept. of Comput. Sci., State Univ. of New York, Stony
Brook, NY, USA
Conference Title: Proceedings 1999 Symposium on Interactive 3D Graphics
p.103-10, 227
Publisher: ACM, New York, NY, USA
Publication Date: 1999 Country of Publication: USA 237 pp.
ISBN: 1 58113 082 1 Material Identity Number: XX-1999-01333
U.S. Copyright Clearance Center Code: 1 58113 082 1/99/04...\$5.00
Conference Title: Proceedings of the 1999 Symposium on Interactive 3D
Graphics
Conference Sponsor: ACM
Conference Date: 26-28 April 1999 Conference Location: Atlanta, GA,
USA
Language: English
Subfile: C
Copyright 2000, IEE

24/3/13 (Item 13 from file: 2)
DIALOG(R)File 2:INSPEC
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6652713 INSPEC Abstract Number: C2000-09-6180G-001
**Title: HI/sup 2/: a two-degrees-of-freedom planar highly isotropic haptic
interface for the desktop**
Author(s): Frisoli, A.; Prisco, G.M.; Salsedo, F.; Bergamasco, M.
Author Affiliation: Scuola Superiore Sant'Anna, PERCRO, Pisa, Italy
Journal: Proceedings of the SPIE - The International Society for Optical
Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA)
vol.3840 p.65-75
Publisher: SPIE-Int. Soc. Opt. Eng,
Publication Date: 1999 Country of Publication: USA
CODEN: PSISDG ISSN: 0277-786X
SICI: 0277-786X(1999)3840L:65:DFPH;1-R
Material Identity Number: C574-2000-012
U.S. Copyright Clearance Center Code: 0277-786X/99/\$10.00
Conference Title: Telemanipulator and Telepresence Technologies VI
Conference Sponsor: SPIE
Conference Date: 19-20 Sept. 1999 Conference Location: Boston, MA, USA

Language: English
Subfile: C
Copyright 2000, IEE

24/3/14 (Item 14 from file: 2)
DIALOG(R)File 2:INSPEC
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6635420 INSPEC Abstract Number: C2000-08-7400-009
Title: Complex construction kits for coupled real and virtual engineering workspaces

Author(s): Bruns, W.F.
Author Affiliation: Res. Center for Work, Environ., Technol., Bremen Univ., Germany

Conference Title: Cooperative Buildings. Integrating Information, Organizations and Architecture. Second International Workshop, CoBuild'99. Proceedings (Lecture Notes in Computer Science Vol.1670) p.55-68

Editor(s): Streitz, N.A.; Siegal, J.; Hartkopf, V.; Konomi, S.

Publisher: Springer-Verlag, Berlin, Germany

Publication Date: 1999 Country of Publication: Germany x+229 pp.

ISBN: 3 540 66596 X Material Identity Number: XX-1999-03161

Conference Title: Cooperative Buildings. Integrating Information, Organizations and Architecture. Second International Workshop, CoBuild'99

Conference Date: 1-2 Oct. 1999 Conference Location: Pittsburgh, PA, USA

Language: English

Subfile: C

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24/3/15 (Item 15 from file: 2)
DIALOG(R)File 2:INSPEC
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6559540 INSPEC Abstract Number: C2000-05-6130B-021
Title: inTouch: interactive multiresolution modeling and 3D painting with a haptic interface

Author(s): Gregory, A.D.; Ehmann, S.A.; Lin, M.C.

Author Affiliation: Dept. of Comput. Sci., North Carolina Univ., Chapel Hill, NC, USA

Conference Title: Proceedings IEEE Virtual Reality 2000 (Cat. No.00CB37048) p.45-52

Editor(s): Feiner, S.; Thalmann, D.

Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA

Publication Date: 2000 Country of Publication: USA xx+302 pp.

ISBN: 0 7695 0478 7 Material Identity Number: XX-2000-00678

U.S. Copyright Clearance Center Code: 0 7695 0478 7/2000/\$10.00

Conference Title: Proceedings IEEE Virtual Reality 2000

Conference Sponsor: IEEE Comput. Soc. Tech. Committee on Visualization & Graphics

Conference Date: 18-22 March 2000 Conference Location: New Brunswick, NJ, USA

Language: English

Subfile: C

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24/3/16 (Item 16 from file: 2)
DIALOG(R)File 2:INSPEC
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6559539 INSPEC Abstract Number: C2000-05-7400-027

Title: Optimization-based virtual surface contact manipulation at force control rates

Author(s): Nelson, D.D.; Cohen, E.

Author Affiliation: Dept. of Comput. Sci., Utah Univ., Salt Lake City, UT, USA

Conference Title: Proceedings IEEE Virtual Reality 2000 (Cat. No.00CB37048) p.37-44

Editor(s): Feiner, S.; Thalmann, D.

Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA

Publication Date: 2000 Country of Publication: USA xx+302 pp.

ISBN: 0 7695 0478 7 Material Identity Number: XX-2000-00678

U.S. Copyright Clearance Center Code: 0 7695 0478 7/2000/\$10.00

Conference Title: Proceedings IEEE Virtual Reality 2000

Conference Sponsor: IEEE Comput. Soc. Tech. Committee on Visualization & Graphics

Conference Date: 18-22 March 2000 Conference Location: New Brunswick, NJ, USA

Language: English

Subfile: C

Copyright 2000, IEE

24/3/17 (Item 17 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6470251 INSPEC Abstract Number: A2000-04-4240K-007, B2000-02-4350-076

Title: Development of a 3D camera

Author(s): Carlsson, T.; Gustafsson, J.; Nilsson, B.

Author Affiliation: Dept. of Mater. Process., R. Inst. of Technol., Stockholm, Sweden

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA)

vol.3637 p.218-24

Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 1999 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

SICI: 0277-786X(1999)3637L:218:DC;1-S

Material Identity Number: C574-1999-126

U.S. Copyright Clearance Center Code: 0277-786X/99/\$10.00

Conference Title: Practical Holography XIII

Conference Sponsor: SPIE

Conference Date: 25 Jan. 1999 Conference Location: San Jose, CA, USA

Language: English

Subfile: A B

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24/3/18 (Item 18 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6397772 INSPEC Abstract Number: C1999-12-7440-115

Title: Interactive mechanical design variation for haptics and CAD

Author(s): Nelson, D.D.; Cohen, E.

Author Affiliation: Dept. of Comput. Sci., Utah Univ., Salt Lake City, UT, USA

Journal: Computer Graphics Forum Conference Title: Comput. Graph. Forum (UK) vol.18, no.3 p.C287-96

John Sims EIC 3700 308-4836

Publisher: Blackwell Publishers for Eurographics Assoc,
Publication Date: 1999 Country of Publication: UK
CODEN: CGFODY ISSN: 0167-7055
SICI: 0167-7055(1999)18:3L.c287:IMDV;1-1
Material Identity Number: B332-1999-004
Conference Title: European Association for Computer Graphics 20th Annual
Conference. EUROGRAPHICS'99
Conference Sponsor: 3M Italia; AGFA Copying Syst. Div.; A.I.S.; ALINARI;
ALITALIA Official Conf. Carrier; et al
Conference Date: 7-11 Sept. 1999 Conference Location: Milan, Italy
Language: English
Subfile: C
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24/3/19 (Item 19 from file: 2)
DIALOG(R)File 2:INSPEC
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6396093 INSPEC Abstract Number: C1999-12-6130V-013
Title: Cooperative object manipulation in virtual space using virtual physics
Author(s): Noma, H.; Miyasato, T.
Author Affiliation: ATR Media Integration & Commun. Res. Lab., Kyoto, Japan
Conference Title: Proceedings of the ASME Dynamic Systems and Control Division p.101-6
Editor(s): Rizzoni, G.
Publisher: ASME, New York, NY, USA
Publication Date: 1997 Country of Publication: USA x+766 pp.
ISBN: 0 7918 1824 1 Material Identity Number: XX-1999-00147
Conference Title: Proceedings of ASME Dynamic Systems and Control Division - 1997
Conference Sponsor: ASME
Conference Date: 16-21 Nov. 1997 Conference Location: Dallas, TX, USA
Language: English
Subfile: C
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24/3/20 (Item 20 from file: 2)
DIALOG(R)File 2:INSPEC
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6396092 INSPEC Abstract Number: C1999-12-7480-089
Title: Direct integration of haptic user interface in CAD systems
Author(s): Stewart, P.; Yifan Chen; Buttolo, P.
Author Affiliation: Sci. Res. Lab., Ford Motor Co., Dearborn, MI, USA
Conference Title: Proceedings of the ASME Dynamic Systems and Control Division p.93-9
Editor(s): Rizzoni, G.
Publisher: ASME, New York, NY, USA
Publication Date: 1997 Country of Publication: USA x+766 pp.
ISBN: 0 7918 1824 1 Material Identity Number: XX-1999-00147
Conference Title: Proceedings of ASME Dynamic Systems and Control Division - 1997
Conference Sponsor: ASME
Conference Date: 16-21 Nov. 1997 Conference Location: Dallas, TX, USA
Language: English
Subfile: C
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24/3/21 (Item 21 from file: 2)
DIALOG(R)File 2:INSPEC
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6396085 INSPEC Abstract Number: C1999-12-6130V-010
Title: Maneuverable NURBS models within a haptic virtual environment
Author(s): Thompson, T.V., II; Nelson, D.D.; Cohen, E.; Hollerbach, J.
Author Affiliation: Dept. of Comput. Sci., Utah Univ., Salt Lake City, UT, USA
Conference Title: Proceedings of the ASME Dynamic Systems and Control Division p.37-44
Editor(s): Rizzoni, G.
Publisher: ASME, New York, NY, USA
Publication Date: 1997 Country of Publication: USA x+766 pp.
ISBN: 0 7918 1824 1 Material Identity Number: XX-1999-00147
Conference Title: Proceedings of ASME Dynamic Systems and Control Division - 1997
Conference Sponsor: ASME
Conference Date: 16-21 Nov. 1997 Conference Location: Dallas, TX, USA
Language: English
Subfile: C
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24/3/22 (Item 22 from file: 2)
DIALOG(R)File 2:INSPEC
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6395917 INSPEC Abstract Number: C1999-12-7480-087
Title: Virtual assembly and disassembly simulation
Author(s): Gutierrez, T.; Barbero, J.I.; Eguidazu, A.
Author Affiliation: LABEIN, Bilbao, Spain
Conference Title: Intelligent Assembly and Disassembly (IAD'98). Proceedings volume from the IFAC Workshop p.35-40
Editor(s): Kopacek, P.; Noe, D.
Publisher: Elsevier Sci, Kidlington, UK
Publication Date: 1998 Country of Publication: UK vi+183 pp.
ISBN: 0 08 043042 2 Material Identity Number: XX-1998-01134
Conference Title: Proceedings of IAD '98 1st IFAC Intelligent Assembly and Disassembly
Conference Sponsor: IFAC
Conference Date: 21-23 May 1998 Conference Location: Bled, Slovenia
Language: English
Subfile: C
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24/3/23 (Item 23 from file: 2)
DIALOG(R)File 2:INSPEC
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6296490 INSPEC Abstract Number: C1999-08-7480-110
Title: Haptic feedback for virtual assembly
Author(s): Luecke, G.R.; Zafer, N.
Author Affiliation: Iowa State Univ., Ames, IA, USA
Journal: Proceedings of the SPIE - The International Society for Optical Engineering
Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA)
vol.3524 p.115-22
Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 1998 Country of Publication: USA
CODEN: PSISDG ISSN: 0277-786X
SICI: 0277-786X(1998)3524L:115:HFVA;1-6
Material Identity Number: C574-1999-065
U.S. Copyright Clearance Center Code: 0277-786X/98/\$10.00
Conference Title: Telem manipulator and Telepresence Technologies V
Conference Sponsor: SPIE
Conference Date: 4-5 Nov. 1998 Conference Location: Boston, MA, USA
Language: English
Subfile: C
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24/3/24 (Item 24 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6280217 INSPEC Abstract Number: C1999-08-6130V-002

Title: Invited review: the synergy between virtual reality and robotics

Author(s): Burdea, G.C.

Author Affiliation: Dept. of Electr. & Comput. Eng., Rutgers Univ.,
Piscataway, NJ, USA

Journal: IEEE Transactions on Robotics and Automation vol.15, no.3
p.400-10

Publisher: IEEE,

Publication Date: June 1999 Country of Publication: USA

CODEN: IRAUEZ ISSN: 1042-296X

SICI: 1042-296X(199906)15:3L:400:IRSB;1-1

Material Identity Number: M938-1999-004

U.S. Copyright Clearance Center Code: 1042-296X/99/\$10.00

Language: English

Subfile: C

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24/3/25 (Item 25 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6259680 INSPEC Abstract Number: C1999-07-7410F-023

Title: Virtual prototyping of advanced telecommunication products

Author(s): Pulli, P.; Kerttula, M.; Salmela, M.

Author Affiliation: Infotech Res. Centre, Oulu Univ., Finland

Conference Title: 2nd International Conference on Machine Automation
Advanced Mechatronics: first-time-right. Proceedings of the ICMA'98

Part vol. 2 p.397-408 vol. 2

Editor(s): Kivikoski, M.

Publisher: Tampere University of Technology, Tampere, Finland

Publication Date: 1998 Country of Publication: Finland 2 vol. 848 pp.

Material Identity Number: XX-1999-01155

Conference Title: Proceedings of 2nd International Conference on Machine
Automation

Conference Date: 15-18 Sept. 1998 Conference Location: Tampere,
Finland

Language: English

Subfile: C

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24/3/26 (Item 26 from file: 2)

DIALOG(R)File 2:INSPEC

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6216803 INSPEC Abstract Number: C1999-05-7850-015

Title: Second European Conference on Disability, Virtual Reality and Associated Technologies (ECDVRAT'98)

Journal: International Journal of Virtual Reality vol.3, no.4

Publisher: IPI Press,

Publication Date: 1998 Country of Publication: USA

CODEN: IJVRF8 ISSN: 1081-1451

Material Identity Number: D426-1999-001

Conference Title: Second European Conference on Disability, Virtual Reality and Associated Technologies (ECDVRAT'98)

Conference Date: 1998 Conference Location: Reading, UK

Language: English

Subfile: C

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24/3/27 (Item 27 from file: 2)

DIALOG(R)File 2:INSPEC

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5959743 INSPEC Abstract Number: C9808-7420D-005

Title: A virtual excavator for controller development and evaluation

Author(s): Diaio, S.P.; Salcudean, S.E.; Reboulet, C.; Tafazoli, S.; Hashtrudi-Zaad, K.

Author Affiliation: Dept. of Electr. & Comput. Eng., British Columbia Univ., Vancouver, BC, Canada

Conference Title: Proceedings. 1998 IEEE International Conference on Robotics and Automation (Cat. No.98CH36146) Part vol.1 p.52-8 vol.1

Publisher: IEEE, New York, NY, USA

Publication Date: 1998 Country of Publication: USA 4 vol. lxxv+3744 pp.

ISBN: 0 7803 4300 X Material Identity Number: XX98-01209

U.S. Copyright Clearance Center Code: 0 7803 4300 X/98/\$10.00

Conference Title: IEEE International Conference on Robotics and Automation

Conference Sponsor: IEEE Robotics & Autom. Soc

Conference Date: 16-20 May 1998 Conference Location: Leuven, Belgium

Language: English

Subfile: C

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24/3/28 (Item 28 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

5953360 INSPEC Abstract Number: C9808-3390M-010

Title: Haptic manipulation of virtual mechanisms from mechanical CAD designs

Author(s): Nahvi, A.; Nelson, D.D.; Hollerbach, J.M.; Johnson, D.E.

Author Affiliation: Dept. of Comput. Sci. & Mech. Eng., Utah Univ., Salt Lake City, UT, USA

Conference Title: Proceedings. 1998 IEEE International Conference on Robotics and Automation (Cat. No.98CH36146) Part vol.1 p.375-80 vol.1

Publisher: IEEE, New York, NY, USA

Publication Date: 1998 Country of Publication: USA 4 vol. lxxv+3744 pp.

ISBN: 0 7803 4300 X Material Identity Number: XX98-01209

U.S. Copyright Clearance Center Code: 0 7803 4300 X/98/\$10.00

Conference Title: IEEE International Conference on Robotics and Automation

Conference Sponsor: IEEE Robotics & Autom. Soc

Conference Date: 16-20 May 1998 Conference Location: Leuven, Belgium

Language: English

Subfile: C

Copyright 1998, IEE

24/3/29 (Item 29 from file: 2)

DIALOG(R) File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

5722540 INSPEC Abstract Number: C9711-6130B-115

Title: Physically based models for use in a force feedback virtual environment

Author(s): Edwards, J.C.; Luecke, G.R.

Author Affiliation: Dept. of Mech. Eng., Iowa State Univ., Ames, IA, USA

Conference Title: Proceedings of the Japan-USA Symposium on Flexible Automation - 1996 Part vol.1 p.221-8' vol.1

Editor(s): Stelson, K.; Oba, F.

Publisher: ASME, New York, NY, USA

Publication Date: 1996 Country of Publication: USA 2 vol. xviii+1565 pp.

ISBN: 0 7918 1231 6 Material Identity Number: XX96-02086

Conference Title: Proceedings of 1996 Japan-USA Symposium on Flexible Automation

Conference Sponsor: ASME; Inst. Syst. Control & Inf. Eng. Japan

Conference Date: 7-10 July 1996 Conference Location: Boston, MA, USA

Language: English

Subfile: C

Copyright 1997, IEE

24/3/30 (Item 30 from file: 2)

DIALOG(R) File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

5705421 INSPEC Abstract Number: C9711-7480-071

Title: Prototyping and design for assembly analysis using multimodal virtual environments

Author(s): Gupta, R.; Whitney, D.; Zeltzer, D.

Author Affiliation: Schlumberger Austin Product Center, Austin, TX, USA

Journal: Computer Aided Design vol.29, no.8 p.585-97

Publisher: Elsevier,

Publication Date: Aug. 1997 Country of Publication: UK

CODEN: CAIDA5 ISSN: 0010-4485

SICI: 0010-4485(199708)29:8L:585:PDAA;1-5

Material Identity Number: C090-97007

U.S. Copyright Clearance Center Code: 0010-4485/97/\$17.00+0.00

Language: English

Subfile: C

Copyright 1997, IEE

24/3/31 (Item 31 from file: 2)

DIALOG(R) File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

5684595 INSPEC Abstract Number: C9710-7480-097

Title: Concept development support with virtual prototyping

John Sims EIC 3700 308-4836

Author(s): Tuikka, T.
Author Affiliation: Dept. of Inf. Process. Sci., Oulu Univ., Finland
Conference Title: Proceedings TeamCAD: GUV/NIST Workshop on Collaborative Design p.217-18
Editor(s): Rossignac, J.
Publisher: Georgia Inst. Technol, Atlanta, GA, USA
Publication Date: 1997 Country of Publication: USA iii+249 pp.
Material Identity Number: XX97-01574
Conference Title: Proceedings of TeamCAD: 1st GUV Workshop on Collaborative Design
Conference Date: 12-13 May 1997 Conference Location: Atlanta, GA, USA
Language: English
Subfile: C
Copyright 1997, IEE

24/3/32 (Item 32 from file: 2)
DIALOG(R)File 2:INSPEC
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

5399633 INSPEC Abstract Number: C9611-5540B-005
Title: Virtual cooperating manipulators as a virtual reality haptic interface
Author(s): Luecke, G.R.; Edwards, J.C.
Author Affiliation: Dept. of Mech. Eng., Iowa State Univ., Ames, IA, USA
Conference Title: Proceedings. Third Annual Symposium on Human Interaction with Complex Systems. HICS'96 (Cat. No.96TB100050) p.133-40
Publisher: IEEE Comput. Soc. Press, Los Alamitos, CA, USA
Publication Date: 1996 Country of Publication: USA x+285 pp.
ISBN: 0 8186 7493 8 Material Identity Number: XX96-02783
U.S. Copyright Clearance Center Code: 0 8186 7493 8/96/\$5.00
Conference Title: Proceedings Third Annual Symposium on Human Interaction with Complex Systems. HICS'96
Conference Sponsor: IEEE Comput. Soc.; IEEE Comput. Soc. Tech. Committee on Multimedia Comput.; North Carolina A&T State Univ.; Wright State Univ
Conference Date: 25-28 Aug. 1996 Conference Location: Dayton, OH, USA
Language: English
Subfile: C
Copyright 1996, IEE

24/3/33 (Item 1 from file: 6)
DIALOG(R)File 6:NTIS
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2207609 NTIS Accession Number: ADA392659/XAB
Virtual Structural Dynamics, Acoustics and Control
(Final rept. 31 Mar 2000-30 Mar 2001)
Baz, A. R.
Maryland Univ., College Park. Dept. of Mechanical Engineering.
Corp. Source Codes: 005683036; 219635
Report No.: ARO-40725.1-EG-RIP
Jun 2001 7p
Languages: English
Journal Announcement: USGRDR0124
Original contains color plates: All DTIC reproductions will be in black and white.
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NTIS Prices: PC A02/MF A01

24/3/34 (Item 2 from file: 6)

DIALOG(R)File 6:NTIS

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2093729 NTIS Accession Number: PB98-170244/XAB

Haptic Rendering System for Virtual Handheld Electronic Products

Anttila, T.

Valtion Teknillinen Tutkimuskeskus, Espoo (Finland). Electronics.

Corp. Source Codes: 067526043

Report No.: VTT-PUBS-347; ISBN-951-38-5232-6

May 98 82p

Languages: English Document Type: Thesis

Journal Announcement: GRAI9823

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NTIS Prices: PC A06/MF A01

24/3/35 (Item 3 from file: 6)

DIALOG(R)File 6:NTIS

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1634374 NTIS Accession Number: AD-A245 342/1

Finite Memory Model for Haptic Recognition

(Master's thesis)

Beierl, P. G.

Naval Postgraduate School, Monterey, CA.

Corp. Source Codes: 019895000; 251450

Dec 91 81p

Languages: English Document Type: Thesis

Journal Announcement: GRAI9210

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A05/MF A01

24/3/36 (Item 1 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

08512152 E.I. No: EIP01045592746

Title: Enhancing randomized motion planners: Exploring with haptic hints

Author: Bayazit, O. Burchan; Song, Guang; Amato, Nancy M.

Corporate Source: Texas A&M Univ, College Station, TX, USA

Source: Autonomous Robots v 10 n 2 Mar 2001. p 163-174

Publication Year: 2001

CODEN: AUROF2 ISSN: 0929-5593

Language: English

24/3/37 (Item 2 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

John Sims EIC 3700 308-4836

06303493 E.I. No: EIP03097373097

Title: Integrating active tangible devices with a synthetic environment for collaborative engineering

Author: Ressler, Sandy; Antonishek, Brian; Wang, Qiming; Godil, Afzal
Corporate Source: Information Technology Laboratory Natl. Inst. of Std. and Technology, Gaithersburg, MD, United States

Conference Title: Proceedings of the 2001 Web3D Symposium
Conference Location: Paderborn, Germany Conference Date: 20010219-20010222

E.I. Conference No.: 60497
Source: Web3D 2001 Symposium 2001.
Publication Year: 2001
ISBN: 1581133391
Language: English

24/3/38 (Item 3 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

06022146 E.I. No: EIP02126891025

Title: Design and optimization of a purely rotational 3 DOF haptic device

Author: Ullrich, N.G.; Di Lieto, G.; Salsedo, F.; Bergamasco, M.
Corporate Source: PERCRO Scuola Superiore S. Anna, 56126 Pisa, Italy
Conference Title: 10th IEEE International Workshop on Robot and Human Communication

Conference Location: Bordeaux-Paris, France Conference Date: 20010918-20010921

E.I. Conference No.: 59054
Source: Robot and Human Communication - Proceedings of the IEEE International Workshop 2001. p 100-105 (IEEE cat n 01TH8591)
Publication Year: 2001
CODEN: 85QKA5
Language: English

24/3/39 (Item 4 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

05927788 E.I. No: EIP01436705613

Title: FEM-based subdivision solids for dynamic and haptic interaction

Author: McDonnell, K.T.; Qin, H.
Corporate Source: Department of Computer Science State University of New York, Stony Brook, NY 11794-4400, United States

Conference Title: 6th ACM Symposium on Solid Modeling and Applications
Conference Location: Ann Arbor, MI, United States Conference Date: 20010606-20010608

E.I. Conference No.: 58595
Source: Proceedings of the Symposium on Solid Modeling and Applications 2001. p 312-313
Publication Year: 2001
Language: English

24/3/40 (Item 5 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

05872462 E.I. No: EIP01336615305

Title: Creation of freeform solid models in virtual reality

Author: Leu, M.C.; Maitech, B.Y.; Blackmore, D.; Fu, L.

Corporate Source: University of Missouri-Rolla, Rolla, MO, United States

Source: CIRP Annals - Manufacturing Technology v 50 n 1 2001. p 73-76

Publication Year: 2001

CODEN: CIRAAT ISSN: 0007-8506

Language: English

24/3/41 (Item 6 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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05781304 E.I. No: EIP01025530247

Title: Ray-based haptic rendering: Force and torque interactions between a line probe and 3D objects in virtual environments

Author: Ho, Chih-Hao; Basdogan, Cagatay; Srinivasan, Mandayam A.

Corporate Source: Massachusetts Inst of Technology, Cambridge, MA, USA

Source: International Journal of Robotics Research v 19 n 7 Jul 2000. p 668-683

Publication Year: 2000

CODEN: IJRREL ISSN: 0278-3649

Language: English

24/3/42 (Item 7 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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05667475 E.I. No: EIP00105351584

Title: Virtual reality moulds ceramics

Author: Tinhnam, Brian

Source: Manufacturing Computer Solutions v 6 n 7 Jul 2000. p 1

Publication Year: 2000

CODEN: MCSOFD ISSN: 1358-1066

Language: English

24/3/43 (Item 8 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

05624590 E.I. No: EIP00085276162

Title: Some current issues in haptics research

Author: Hollerbach, John M.

Corporate Source: Univ of Utah, Salt Lake City, UT, USA

Conference Title: ICRA 2000: IEEE International Conference on Robotics and Automation

Conference Location: San Francisco, CA, USA Conference Date: 19000424-19000428

E.I. Conference No.: 57053

Source: Proceedings - IEEE International Conference on Robotics and Automation v 1 2000. IEEE, Piscataway, NJ, USA. p 757-762

Publication Year: 2000

CODEN: PIIAET ISSN: 1050-4729

Language: English

24/3/44 (Item 9 from file: 8)

DIALOG(R) File 8: Ei Compendex(R)
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05622617 E.I. No: EIP00085273711

Title: Force-feedback improves performance for steering and combined steering-targeting tasks

Author: Dennerlein, Jack Tigh; Martin, David B.; Hasser, Christopher
Corporate Source: Harvard Univ, Boston, MA, USA
Conference Title: CHI 2000 - Conference on Human Factors in Computing Systems 'The Future is Here'
Conference Location: The Hague, Neth Conference Date: 19000401-19000405
E.I. Conference No.: 57092
Source: Conference on Human Factors in Computing Systems - Proceedings 2000. ACM, New York, NY, USA. p 423-429
Publication Year: 2000
CODEN: 002163
Language: English

24/3/45 (Item 10 from file: 8)

DIALOG(R) File 8: Ei Compendex(R)
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05567771 E.I. No: EIP40055178982

Title: Direct haptic rendering of complex trimmed NURBS models

Author: Thompson, Thomas V. II; Cohen, Elaine
Corporate Source: Univ of Utah, Salt Lake City, UT, USA
Conference Title: Dynamic Systems and Control Division - 1999 (The ASME International Mechanical Engineering Congress and Exposition)
Conference Location: Nashville, TN, USA Conference Date: 19991114-19991119
E.I. Conference No.: 56775
Source: American Society of Mechanical Engineers, Dynamic Systems and Control Division (Publication) DSC v 67 1999. p 109-116
Publication Year: 1999
CODEN: ASMDEV ISBN: 0-7918-1634-6
Language: English

24/3/46 (Item 11 from file: 8)

DIALOG(R) File 8: Ei Compendex(R)
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05567770 E.I. No: EIP40055178981

Title: Haptic rendering of surface-to-surface sculpted model interaction

Author: Nelson, Donald D.; Johnson, David E.; Cohen, Elaine
Corporate Source: Univ of Utah, Salt Lake City, UT, USA
Conference Title: Dynamic Systems and Control Division - 1999 (The ASME International Mechanical Engineering Congress and Exposition)
Conference Location: Nashville, TN, USA Conference Date: 19991114-19991119
E.I. Conference No.: 56775
Source: American Society of Mechanical Engineers, Dynamic Systems and Control Division (Publication) DSC v 67 1999. p 101-108
Publication Year: 1999
CODEN: ASMDEV ISBN: 0-7918-1634-6
Language: English

24/3/47 (Item 12 from file: 8)

John Sims EIC 3700 308-4836

DIALOG(R)File 8: Ei Compendex(R)
(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

05383806 E.I. No: EIP99094775939

Title: Design of 3D haptic widgets

Author: Miller, Timothy; Zeleznik, Robert

Corporate Source: Brown Univ, Providence, RI, USA

Conference Title: Proceedings of the 1999 Symposium on Interactive 3D Graphics

Conference Location: Atlanta, GA, USA Conference Date: 19990426-19990428

E.I. Conference No.: 55446

Source: Proceedings of the Symposium on Interactive 3D Graphics 1999. p 97-102

Publication Year: 1999

CODEN: 002166

Language: English

24/3/48 (Item 13 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

05383602 E.I. No: EIP99104833334

Title: Mechatronic device for simulating push-buttons and knobs

Author: Allotta, B.; Colla, V.; Bioli, G.

Corporate Source: Scuola Superiore Sant'Anna, Pisa, Italy

Conference Title: Proceedings of the 1999 6th International Conference on Multimedia Computing and Systems - IEEE ICMCS'99

Conference Location: Florence, Italy Conference Date: 19990607-19990611

E.I. Conference No.: 55370

Source: International Conference on Multimedia Computing and Systems-Proceedings v 1 1999. p 636-642

Publication Year: 1999

CODEN: 002114

Language: English

24/3/49 (Item 14 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

05199079 E.I. No: EIP99014521589

Title: Improved method for haptic tracing of a sculptured surface

Author: Johnson, David E.; Cohen, Elaine

Corporate Source: Univ of Utah, Salt Lake City, UT, USA

Conference Title: Proceedings of the 1998 ASME International Mechanical Engineering Congress and Exposition

Conference Location: Anaheim, CA, USA Conference Date: 19981115-19981120

E.I. Conference No.: 49454

Source: Dynamic Systems and Control Division American Society of Mechanical Engineers, Dynamic Systems and Control Division (Publication) DSC v 64 1998. ASME, Fairfield, NJ, USA. p 243-248

Publication Year: 1998

CODEN: ASMDEV

Language: English

24/3/50 (Item 15 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

John Sims EIC 3700 308-4836

(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

05101605 E.I. No: EIP98084348007

Title: Haptic display for object grasping and manipulating in virtual environment

Author: Maekawa, Hitoshi; Hollerbach, John M.

Corporate Source: Univ of Utah, Salt Lake City, UT, USA

Conference Title: Proceedings of the 1998 IEEE International Conference on Robotics and Automation. Part 3 (of 4)

Conference Location: Leuven, Belgium Conference Date: 19980516-19980520

E.I. Conference No.: 48824

Source: Proceedings - IEEE International Conference on Robotics and Automation v 3 1998. IEEE, Piscataway, NJ, USA, 98CH36146. p 2566-2573

Publication Year: 1998

CODEN: PIIAET ISSN: 1050-4729

Language: English

24/3/51 (Item 16 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

05010291 E.I. No: EIP98054180898

Title: Haptic feedback for virtual reality computer aided design

Author: Springer, Scott L.; Gadh, Rajit

Corporate Source: Univ of Wisconsin-Madison, Madison, WI, USA

Conference Title: Proceedings of the 1997 ASME International Mechanical Engineering Congress and Exposition

Conference Location: Dallas, TX, USA Conference Date: 19971116-19971121

E.I. Conference No.: 47756

Source: Concurrent Product Design and Environmentally Conscious Manufacturing American Society of Mechanical Engineers, Design Engineering Division (Publication) DE v 94 1997. ASME, Fairfield, NJ, USA. p 1-8

Publication Year: 1997

CODEN: AMEDEH

Language: English

24/3/52 (Item 17 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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05010290 E.I. No: EIP98054180740

Title: Proceedings of the 1997 ASME International Mechanical Engineering Congress and Exposition

Author: Billatos, S.B. (Ed.); Zhang, H.C. (Ed.)

Conference Title: Proceedings of the 1997 ASME International Mechanical Engineering Congress and Exposition

Conference Location: Dallas, TX, USA Conference Date: 19971116-19971121

E.I. Conference No.: 47756

Source: Concurrent Product Design and Environmentally Conscious Manufacturing American Society of Mechanical Engineers, Design Engineering Division (Publication) DE v 94 1997. ASME, Fairfield, NJ, USA. 295p

Publication Year: 1997

CODEN: AMEDEH

Language: English

24/3/53 (Item 18 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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John Sims EIC 3700 308-4836

04792739 E.I. No: EIP97083790097

Title: Challenge to design intelligent consumer and domestic product interfaces

Author: Bonner, John V.H.

Corporate Source: Teesside Univ, Cleveland, UK

Conference Title: Proceedings of the 1996 IEE Colloquium on Artificial Intelligence in Consumer and Domestic Products

Conference Location: London, UK Conference Date: 19961022

E.I. Conference No.: 46868

Source: IEE Colloquium (Digest) n 212 1996. IEE, Stevenage, Engl. 4p

Publication Year: 1996

CODEN: DCILDN ISSN: 0963-3308

Language: English

24/3/54 (Item 19 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

04761281 E.I. No: EIP97073740686

Title: Direct haptic rendering of sculptured models

Author: Thompson, Thomas V. II; Johnson, David E.; Cohen, Elaine

Corporate Source: Univ of Utah, Salt Lake City, UT, USA

Conference Title: Proceedings of the 1997 Symposium on Interactive 3D Graphics

Conference Location: Providence, RI, USA Conference Date: 19970427-19970430

E.I. Conference No.: 46661

Source: Proceedings of the Symposium on Interactive 3D Graphics 1997. ACM, New York, NY, USA. p 167-176

Publication Year: 1997

CODEN: 002166

Language: English

24/3/55 (Item 20 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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04665392 E.I. No: EIP97043595435

Title: Haptic display of visual images

Author: Shi, Yunling; Pai, Dinesh K.

Corporate Source: Univ of British Columbia, Vancouver, BC, Can

Conference Title: Proceedings of the 1997 IEEE Virtual Reality Annual International Symposium

Conference Location: Albuquerque, NM, USA Conference Date: 19970301-19970305

E.I. Conference No.: 46227

Source: Proceedings - Virtual Reality Annual International Symposium 1997. IEEE, Los Alamitos, CA, USA, 97CB36033. p 188-191

Publication Year: 1997

CODEN: 85RWAC

Language: English

24/3/56 (Item 21 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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04622055 E.I. No: EIP97023518779

John Sims EIC 3700 308-4836

Title: Proceedings of the IEE Colloquium on Virtual Reality - User Issues
Author: Anon (Ed.)
Conference Title: Proceedings of the IEE Colloquium on Virtual Reality - User Issues
Conference Location: London, UK Conference Date: 19960325
E.I. Conference No.: 45941
Source: IEE Colloquium (Digest) n 068 1996.. var paging
Publication Year: 1996
CODEN: DCILDN
Language: English

24/3/57 (Item 22 from file: 8)
DIALOG(R)File 8: Ei Compendex(R)
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04409486 E.I. No: EIP96053197284
Title: Tactile and kinesthetic feedback in virtual environments
Author: Taylor, Paul
Corporate Source: Univ of Hull, Hull, Engl
Source: Transactions of the Institute of Measurement and Control v 17 n 5
1995. p 225-233
Publication Year: 1995
CODEN: TICODG ISSN: 0142-3312
Language: English

24/3/58 (Item 23 from file: 8)
DIALOG(R)File 8: Ei Compendex(R)
(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

04281276 E.I. No: EIP95112912083
Title: Imposing motion constraints to a force reflecting telerobot through real-time simulation of a virtual mechanism
Author: Joly, Luc D.; Andriot, Claude
Corporate Source: Commissariat a l'Energie Atomique (CEA), Fontenay-Aux-Roses, Fr
Conference Title: Proceedings of the 1995 IEEE International Conference on Robotics and Automation. Part 1 (of 3)
Conference Location: Nagoya, Jpn Conference Date: 19950521-19950527
E.I. Conference No.: 43853
Source: Proceedings - IEEE International Conference on Robotics and Automation v 1 1995. IEEE, Piscataway, NJ, USA, 95CB3461-1. p 357-362
Publication Year: 1995
CODEN: PIIAET ISSN: 1050-4729
Language: English

24/3/59 (Item 24 from file: 8)
DIALOG(R)File 8: Ei Compendex(R)
(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

04034737 E.I. No: EIP95012506677
Title: Development of 3D-input device for virtual surface manipulation
Author: Yokoi, Hiroshi; Yamashita, Juli; Fukuji, Yukio; Shimojo, Makoto
Corporate Source: Natl Inst of Bioscience and Human Technology, Tsukuba, Jpn
Conference Title: Proceedings of the 3rd IEEE International Workshop on Robot and Human Communication
Conference Location: Nagoya, USA Conference Date: 19940718-19940720
E.I. Conference No.: 21527

Source: Robot and Human Communication - Proceedings of the IEEE International Workshop 1994. IEEE, Piscataway, NJ, USA, 94TH0679-1. p 134-139

Publication Year: 1994

CODEN: 001672

Language: English

24/3/60 (Item 1 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2003 Inst for Sci Info. All rts. reserv.

09697987 Genuine Article#: 435NJ No. References: 4

Title: Spatial data management for computer - aided design

Author(s): Kriegel HP (REPRINT) ; Muller A; Potke M; Seidl T

Corporate Source: Univ Munich,Inst Comp Sci,D-80539 Munich//Germany/

(REPRINT); Univ Munich,Inst Comp Sci,D-80539 Munich//Germany/

Journal: SIGMOD RECORD, 2001 , V30, N2 (JUN), P614-614

ISSN: 0163-5808 Publication date: 20010600

Publisher: ASSOC COMPUTING MACHINERY, 1515 BROADWAY, NEW YORK, NY 10036 USA

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

24/3/61 (Item 2 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2003 Inst for Sci Info. All rts. reserv.

08551311 Genuine Article#: 299RC No. References: 33

Title: Molecular modelling and drug design

Author(s): Meyer EF (REPRINT) ; Swanson SM; Williams JA

Corporate Source: TEXAS A&M UNIV,DEPT BIOCHEM & BIOPHYS, BIOG LAB/COLLEGE

STN//TX/77843 (REPRINT)

Journal: PHARMACOLOGY & THERAPEUTICS, 2000 , V85, N3 (MAR), P113-121

ISSN: 0163-7258 Publication date: 20000300

Publisher: PERGAMON-ELSEVIER SCIENCE LTD, THE BOULEVARD, LANGFORD LANE,

KIDLINGTON, OXFORD OX5 1GB, ENGLAND

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

24/3/62 (Item 3 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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05866511 Genuine Article#: XD072 No. References: 23

Title: Experiments using multimodal virtual environments in design for assembly analysis

Author(s): Gupta R (REPRINT) ; Sheridan T; Whitney D

Corporate Source: SCHLUMBERGER AUSTIN PROD CTR,GRAPH & MODELING GRP, 8311 N

FM 620 RD/AUSTIN//TX/78726 (REPRINT); MIT,/CAMBRIDGE//MA/02139

Journal: PRESENCE-TELEOPERATORS AND VIRTUAL ENVIRONMENTS, 1997 , V6, N3 (JUN), P318-338

ISSN: 1054-7460 Publication date: 19970600

Publisher: MIT PRESS, 55 HAYWARD ST JOURNALS DEPT, CAMBRIDGE, MA 02142

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

24/3/63 (Item 4 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2003 Inst for Sci Info. All rts. reserv.

05192085 Genuine Article#: VG164 No. References: 13
Title: INTELLIGENT CONTROL FOR HAPTIC DISPLAYS
Author(s): MUNCH S; STANGENBERG M
Corporate Source: UNIV KARLSRUHE, INST REAL TIME COMP SCI & ROBOT, KAISERSTR
12/D-76128 KARLSRUHE//GERMANY/
Journal: COMPUTER GRAPHICS FORUM, 1996 , V15, NSICI, PC217-C226
ISSN: 0167-7055
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

24/3/64 (Item 5 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2003 Inst for Sci Info. All rts. reserv.

04951108 Genuine Article#: UU863 No. References: 20
**Title: THE ROLE OF MANUAL KINESTHESIS IN BUILDING AND IN USING MENTAL
REPRESENTATIONS OF BIDIMENSIONAL OBJECTS**
Author(s): GLOTON C; BELLAN D; POITOU JP
Corporate Source: UNIV AIX MARSEILLE 1, CTR AIX, CNRS URA 182, CREPCO, 29 AV
ROBERT SCHUMAN/F-13621 AIX PROVENCE//FRANCE/
Journal: TRAVAIL HUMAIN, 1996 , V59, N2 (JUN), P137-153
ISSN: 0041-1868
Language: FRENCH Document Type: ARTICLE (Abstract Available)

24/3/65 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.

09024428 20318130 PMID: 10977560
Interactive simulation of tooth cleaning with an interdental brush.
Salb T; Ghanai S; Burgert O; Dillmann R
Universitat Karlsruhe (TH), Department for Computer Science, Germany.
salb@ira.uka.de
Studies in health technology and informatics (NETHERLANDS) 2000 , 70
p295-301, ISSN 0926-9630 Journal Code: 9214582
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

24/3/66 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.

09024403 20318105 PMID: 10977532
**Modeling and modification of medical 3D objects. The benefit of using a
haptic modeling tool.**
Kling-Petersen T; Rydmark M
Mednet, Goteborg, Sweden. kling@mednet.gu.se
Studies in health technology and informatics (NETHERLANDS) 2000 , 70
p162-7, ISSN 0926-9630 Journal Code: 9214582
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

17/7/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

4885397 INSPEC Abstract Number: A9506-8730C-002, C9504-7330-023

Title: Influence of the shape of cardiac ventricles on the resultant heart vectors. A model study

Author(s): Szathmary, V.

Author Affiliation: Inst. of Normal & Pathological Physiol., Slovak Acad. of Sci., Bratislava, Slovakia

p.237-40

Publisher: IEEE Comput. Soc. Press, Los Alamitos, CA, USA

Publication Date: 1993 Country of Publication: USA xxviii+911 pp.

ISBN: 0 8186 5470 8

U.S. Copyright Clearance Center Code: 0276-6547/93/\$3.00

Conference Title: Proceedings of Computers in Cardiology Conference

Conference Sponsor: IEEE

Conference Date: 5-8 Sept. 1993 Conference Location: London, UK

Language: English Document Type: Conference Paper (PA)

Treatment: Theoretical (T)

Abstract: The effect of different curvature of ventricular walls on the resultant **heart** vectors was studied by using an **interactive computer model** of propagated excitation. In this model, the geometry of ventricles is defined by parts of compound ellipsoids. During the series of model experiments the value of input parameter-relative ventricular curvature (RVC), determining the curvature of ventricular walls in apex-base direction, was varied from 0.45 to 1.0. Decrease of the RVC from 1.0 to 0.35 led to a slight decrease of initial vectors, an increase of laterally oriented vectors accompanied with their downwards deviation, as well as to a rapid decrease of the magnitude of terminal vectors along with their rotation to the left. The degree of these changes was indirectly proportional to the respective values of RVC. (3 Refs)

Subfile: A C

Copyright 1995, IEE

17/7/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

00365690 INSPEC Abstract Number: B72011343, C72008144

Title: Computer-aided medical instruction using an interactive graphics model of the normal and congenitally defective heart

Author(s): Rupeiks, I.

Author Affiliation: Univ. California, Los Angeles, CA, USA

Journal: IEEE Transactions on Biomedical Engineering vol.BME-19, no.2 p.88-96

Publication Date: March 1972 Country of Publication: USA

CODEN: IEBEAX ISSN: 0018-9294

Language: English Document Type: Journal Paper (JP)

Treatment: Applications (A); Practical (P)

Abstract: The on-line **interactive** -graphics digital- **computer model** of the normal and congenitally defective **heart** was developed as a basic research and teaching tool. The **interactive** graphics capability of the simulation system provides the user great flexibility in selecting the types of defects he wishes to study, and in allowing him to progress at his own speed. A brief discussion of the interactive graphics system and the modelling equations for the normal heart and congenital defect options: ventricular septal defect, patent ductus arteriosus, valvular stenosis, and valvular incompetence (regurgitation), are included. (16 Refs)

Subfile: B C

17/7/3 (Item 1 from file: 5)
DIALOG(R)File 5: Biosis Previews(R)
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09645139 BIOSIS NO.: 199598100057

Interactive multimedia for prenatal ultrasound training.

AUTHOR: Lee Wesley(a); Ault Heather; Kirk Janet S; Comstock Christine H

AUTHOR ADDRESS: (a)Div. Fetal Imaging, William Beaumont Hosp., 3601 West

Thirteen Mile Rd., Royal Oak, MI 48073**USA

JOURNAL: Obstetrics & Gynecology 85 (1):p135-140 1995

ISSN: 0029-7844

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: This demonstration project examines the utility of interactive multimedia for prenatal ultrasound training. A laser-disc library was linked to a three-dimensional (3-D) **heart model** and other **computer**-based training materials through **interactive** multimedia. A testing module presented ultrasound anomalies and related questions to house-staff physicians through the image library. Users were asked to evaluate these training materials on the basis of perceived instructional value, question content, subjects covered, graphics interface, and ease of use; users were also asked for their comments. House-staff physicians indicated that they consider interactive multimedia to be a helpful adjunct to their core fetal imaging rotation. During a 9-month period, 16 house-staff physicians correctly diagnosed 78 +/- 4% of unknown cases presented through the testing module. The 3-D heart model was also perceived to be a useful teaching aid for spatial orientation skills. Our findings suggest that interactive multimedia and volume visualization models can be used to supplement traditional prenatal ultrasound training. The system provides a broad exposure to ultrasound anomalies, increases opportunities for postnatal correlation, emphasizes motion video for ultrasound training, encourages development of independent diagnostic ability, and helps physicians understand anatomic orientation. We hypothesize that interactive multimedia-based tutorials provide a better overall training experience for house-staff physicians. However, these supplementary methods will require formal evaluation of effectiveness to better understand their potential educational impact.

17/7/4 (Item 2 from file: 5)
DIALOG(R)File 5: Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.

07601865 BIOSIS NO.: 000040113359

COMPUTER MODEL IN INTRA-CARDIAC CONDUCTION AND HEART -PACEMAKER

INTERACTION AN INTERACTIVE EDUCATIONAL VERSION

AUTHOR: MALIK M; AVIES D W; CAMM A J

AUTHOR ADDRESS: DEP. CARDIOLOGICAL SCI., ST. GEORGE'S HOSP. MED. SCH.,
LONDON, ENGL.

JOURNAL: AMERICAN COLLEGE OF CARDIOLOGY 40TH ANNUAL SCIENTIFIC SESSION,
ATLANTA, GEORGIA, USA, MARCH 3-7, 1991. J AM COLL CARDIOL 17 (2 SUPPL. A).
1991. 9A. 1991

CODEN: JACCD

DOCUMENT TYPE: Meeting

RECORD TYPE: Citation

LANGUAGE: ENGLISH

John Sims EIC 3700 308-4836

17/7/5 (Item 1 from file: 6)
DIALOG(R)File 6:NTIS
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0387605 NTIS Accession Number: AD-762 020/XAB

A Computer Graphics Approach for Understanding Prosthetic Heart Valve Characteristics

Au, A. D. K.
Utah Univ Salt Lake City Computer Science Div
Corp. Source Codes: 404949
Report No.: UTEC-CSC-72-118
Jun 72 77p
Journal Announcement: GRAI7315
Sponsored in part by Advanced Research Projects Agency, Arlington, Va.
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A05/MF A01

Contract No.: F30602-70-C-0300

Fluid dynamics principles and numerical analysis techniques are applied in a study of stress distribution in blood caused by the motion of the occluder within the cage of a prosthetic heart valve. The complete Navier-Stokes equations are solved to obtain the solutions of the flow for a two dimensional heart valve model. An interactive computer graphics program is developed for the simulation of the flow process and the pictorial representation of the solution for analysis. Resulting graphics displays show the stress distributions and other flow parameters which describe the movement of a disc occluder from full-closed position to an almost full-open position. The possible contributions of this study to the understanding of hemolysis and thrombosis associated with prosthetic heart valves are discussed. (Author)

17/7/6 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2003 Inst for Sci Info. All rts. reserv.

10525107 Genuine Article#: 538GQ Number of References: 6

Title: A different kind of "total artificial heart": The interactive , computer -based human heart model

Author(s): Pasque MK (REPRINT)

Corporate Source: Washington Univ, Sch Med, Div Cardiothorac Surg, Dept Surg, Suite 3103 Queeny Tower, 1 Barnes Jewish Hosp Plaz/St Louis//MO/63110 (REPRINT); Washington Univ, Sch Med, Div Cardiothorac Surg, Dept Surg, St Louis//MO/63110

Journal: ANNALS OF THORACIC SURGERY, 2002, V73, N4 (APR), P1032-1034

ISSN: 0003-4975 Publication date: 20020400

Publisher: ELSEVIER SCIENCE INC, 655 AVENUE OF THE AMERICAS, NEW YORK, NY 10010 USA

Language: English Document Type: EDITORIAL MATERIAL

?

22/7/3 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 2003 Elsevier Science B.V. All rts. reserv.

12074644 EMBASE No: 2003186101

Use of three-dimensional computer graphic animation to illustrate cleft lip and palate surgery

Cutting C.B.; Oliker A.; Haring J.; Dayan J.; Smith D.
Dr. C.B. Cutting, New York University Medical Center, Inst. of Reconstr.
Plastic Surgery, 333 East 34th Street, New York, NY United States
AUTHOR EMAIL: court.cutting@med.nyu.edu
Computer Aided Surgery (COMPUT. AIDED SURG.) (United States) 2002,
7/6 (326-331)
CODEN: CAISF ISSN: 1092-9088
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 42

Objective: Three-dimensional (3D) computer animation is not commonly used to illustrate surgical techniques. This article describes the surgery-specific processes that were required to produce animations to teach cleft lip and palate surgery. Materials and Methods: Three-dimensional models were created using CT scans of two Chinese children with unrepaired clefts (one unilateral and one bilateral). We programmed several custom software tools, including an incision tool, a forceps tool, and a fat tool. Results: Three-dimensional animation was found to be particularly useful for illustrating surgical concepts. Positioning the virtual "camera" made it possible to view the anatomy from angles that are impossible to obtain with a real camera. Transparency allows the underlying anatomy to be seen during surgical repair while maintaining a view of the overlaying tissue relationships. Finally, the representation of motion allows modeling of anatomical mechanics that cannot be done with static illustrations. The animations presented in this article can be viewed on-line at <http://www.smiletrain.org/programs/virtual-surgery2.htm>. Conclusions: Sophisticated surgical procedures are clarified with the use of 3D animation software and customized software tools. The next step in the development of this technology is the creation of interactive **simulators** that recreate the experience of surgery in a safe, digital environment. (c) 2003 Wiley-Liss, Inc.

22/7/4 (Item 2 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 2003 Elsevier Science B.V. All rts. reserv.

11827708 EMBASE No: 2002400234

Measurements and modelling of the compliance of human and porcine organs

Carter F.J.; Frank T.G.; Davies P.J.; McLean D.; Cuschieri A.
F.J. Carter, Dept. of Surgery/Molecular Oncology, Ninewells
Hospital/Medical School, Dundee DD1 9SY United Kingdom
AUTHOR EMAIL: f.j.carter@dundee.ac.uk
Medical Image Analysis (MED. IMAGE ANAL.) (United Kingdom) 2001, 5/4
(231-236)
CODEN: MIAEC ISSN: 1361-8415
PUBLISHER ITEM IDENTIFIER: S1361841501000482
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 13

Stress-strain data obtained from animal and human tissue have several

applications including medical diagnosis, assisting in surgical instrument design and the production of realistic computer-based **simulators** for training in minimal access surgery. Such data may also be useful for corroborating mathematical models of tissue response. This paper presents data obtained from ex-vivo and in-vivo tissue indentation tests using a small indenter that is similar to instruments used in minimal access surgery. In addition, uniform stress tests provide basic material property data, via an exponential stress-strain law, to allow a finite element method to be used to predict the response for the non-uniform stresses produced by the small indenter. Data are obtained from harvested pig liver and spleen using a static compliance probe. Data for human liver are obtained from volunteer patients, undergoing minor open surgery, using a sterile hand-held compliance probe. All the results demonstrate highly non-linear stress-strain behaviour. Pig spleen is shown to be much more compliant than pig liver with mean elastic moduli of 0.11 and 4.0 MPa respectively. The right lobe of human liver had a mean elastic modulus of about 0.27 MPa. However, a single case of a diseased liver had a mean modulus of 0.74 MPa - nearly three times the stiffness. It was found that an exponential stress-strain law could accurately fit uniform stress test data and that subsequent finite element modelling for non-uniform stress around a small indenter matched measured force characteristics (c) 2001 Elsevier Science B.V. All rights reserved.

22/7/5 (Item 1 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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11629318 99062856 PMID: 9846426

[Biomechanical modeling of instrumentation for the scoliotic spine using flexible elements: a feasibility study]

Modelisation biomecanique de l'instrumentation du rachis scoliotique a l'aide de mecanismes flexibles: etude de faisabilite.

Poulin F; Aubin C E; Stokes I A; Gardner-Morse M; Labelle H

Centre de Recherche, l'Hopital Sainte-Justine, Montreal, Quebec, Canada.

Annales de chirurgie (FRANCE) 1998, 52 (8) p761-7, ISSN 0003-3944

Journal Code: 0140722

Document type: Journal Article ; English Abstract

Languages: FRENCH

Main Citation Owner: NLM

Record type: Completed

Surgical instrumentation of the scoliotic spine is a complex procedure with many parameters, such as the spinal segment to operate on, the number and position of the hooks and screws, etc. Biomechanical modeling is a tool which can be used to determine the influence of these parameters. However, technical difficulties due to the large stiffness range of involved components and the large deformations associated with surgical maneuvers are encountered when using the finite elements method. Thus, the objective of this study is to adapt a modeling approach using analysis of flexible mechanisms and evaluate its feasibility. The model combines rigid bodies for the vertebrae and flexible elements representing intervertebral structures. The mechanical properties were calculated from published data and the geometry was personalized with intraoperative measurements. Following the installation of the hooks and screws on the modeled spine, two steps were used to **simulate** the surgical maneuvers: 1) translation and attachment of the hooks/screws on the first rod; 2) rod rotation. The feasibility of this modeling approach was evaluated by **simulating** the surgical maneuvers on 2 cases: 1) a physical model; 2) a clinical case. The agreement between intraoperative measurements and **simulation** results (frontal curvatures are reproduced with over 80% accuracy) shows the feasibility of the modeling approach. This approach also reduces

computational convergence problems because of its limited sensitivity to stiffness differences between elements, which demonstrates the advantage of flexible mechanism modeling relative to finite element modeling. Long term goals of subsequent refinements are the development of a tool for surgical correction predictions and for the design of more efficient instrumentation.

Record Date Created: 19981223

Record Date Completed: 19981223

22/7/6 (Item 2 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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10217179 96018371 PMID: 7554835

Ophthalmic microsurgical robot and associated virtual environment.

Hunter I W; Jones L A; Sagar M A; Lafontaine S R; Hunter P J

Department of Mechanical Engineering, Massachusetts Institute of Technology, Cambridge 02139, USA.

Computers in biology and medicine (UNITED STATES) Mar 1995, 25 (2)
p173-82, ISSN 0010-4825 Journal Code: 1250250

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

An ophthalmic virtual environment has been developed as part of a teleoperated microsurgical robot built to perform surgery on the eye. The virtual environment is unique in that it incorporates a detailed continuum model of the anatomical structures of the eye, its mechanics and optical properties, together with a less detailed geometric-mechanical model of the face. In addition to providing a realistic visual display of the eye being operated on, the virtual environment **simulates** tissue properties during manipulation and cutting and the forces involved are determined by solving a mechanical finite element model of the tissue. These forces are then fed back to the operator via a force reflecting master and so the surgeon can experience both the visual and mechanical sensations associated with performing surgery. The virtual environment can be used to enhance the images produced by the camera on the microsurgical slave robot during surgery and as a surgical **simulator** in which it replaces these images with computer graphics generated from the eye model.

Record Date Created: 19951030

Record Date Completed: 19951030

?

28/3,AB/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

7403916 INSPEC Abstract Number: C2002-11-7330-281

Title: Training and assessment of laparoscopic skills using a haptic simulator

Author(s): Rolfsson, G.; Nordgren, A.; Bindzau, S.; Hagstrom, J.-P.; McLaughlin, J.; Thurfjell, L.

Author Affiliation: Reachin Technol. AB, Stockholm, Sweden

Conference Title: Medicine Meets Virtual Reality 02/10. Digital Upgrades: Applying Moore's Law to Health p.409-11

Editor(s): Westwood, J.D.; Hoffman, H.M.; Robb, R.A.; Stredney, D.

Publisher: IOS Press, Amsterdam, Netherlands

Publication Date: 2002 Country of Publication: Netherlands xii+600 pp.

ISBN: 1 58603 203 8 Material Identity Number: XX-2002-01963

Conference Title: Medicine Meets Virtual Reality 02/10. Digital Upgrades: Applying Moore's Law to Health

Conference Date: 23-26 Jan. 2002 Conference Location: Newport Beach, CA, USA

Language: English

Abstract: Surgical **simulation** is a promising technique for training of laparoscopic surgery. **Computer** based **simulation** provides not only a cost effective alternative to traditional training but also a way to assess the surgeons performance. We present a haptic **simulator** that allows for training and assessment of basic laparoscopic skills. The skills trained are **modeled** around a cholecystectomy procedure and include bi-manual dissection, clips setting, catheter insertion and cutting. The system uses accurate anatomic **models** of the organs involved in the procedure. This combined with effective methods for soft tissue deformation and haptic feedback, giving the surgeon a precise feeling of the interaction between organs and **surgical instruments**, provides a realistic training environment. The system has been **designed** with procedural training in mind and by putting together the individual tasks it will be possible to train in performing a complete cholecystectomy procedure.

Subfile: C

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28/3,AB/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

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6495284 INSPEC Abstract Number: C2000-03-7330-252

Title: A PC-based surgical simulator for laparoscopic surgery

Author(s): Tseng, C.S.; Lee, Y.Y.; Chan, Y.P.; Wu, S.S.; Chiu, A.W.

Author Affiliation: Dept. of Mech. Eng., Nat. Central Univ., Chung-Li, Taiwan

Conference Title: Medicine Meets Virtual Reality. Art, Science, Technology: Healthcare (R)Evolution. Proceedings of Medicine Meets Virtual Reality 6 p.155-60

Editor(s): Westwood, J.D.; Hoffman, H.M.; Stredney, D.; Weghorst, S.J.

Publisher: IOS Press, Amsterdam, Netherlands

Publication Date: 1998 Country of Publication: Netherlands xv+409 pp.

ISBN: 90 5199 386 2 Material Identity Number: XX-1998-00838

Conference Title: Proceedings of Medicine Meets Virtual Reality

Conference Date: 28-31 Jan. 1998 Conference Location: San Diego, CA, USA

Language: English

Abstract: Surgical **simulators** for minimally invasive surgery have been developed in the 1990s. Most of them use high-end UNIX workstations for real-time **simulation** of complex human organ **models**. Only a few of them have input devices with force feedback. Recently, personal **computer** technologies have made the real-time display of relatively complex **models** feasible. We are developing an Intel-based laparoscopic surgical **simulator** that provides near-real-time intuitive interaction between the trainee and the **simulated models** of the human organs. The surgical **simulator** has a prototypical scenario of cholecystectomy surgery. It can interactively **simulate** the deformation and cutting of cystic ducts and veins. In addition, a set of input devices with force feedback has been **designed** and tested to imitate the manipulation of **surgical instruments**. The input **device** has five degrees of freedom, and three of them are driven by DC motors to produce force feedback.

Subfile: C

Copyright 2000, IEE

28/3,AB/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

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5184389 INSPEC Abstract Number: A9606-8770G-003, B9603-7520-010, C9603-7330-140

Title: 3D modelling for computer-assisted neurosurgical procedures

Author(s): Krishnan, S.M.; Wang, J.T.; Cao, G.

Author Affiliation: Sch. of Electr. & Electron. Eng., Nanyang Technol. Univ., Singapore

Journal: Biomedical Engineering, Applications Basis Communications
vol.7, no.5 p.481-5

Publisher: Biomed. Eng. Soc. Republic of China,

Publication Date: 25 Oct. 1995 Country of Publication: Taiwan

CODEN: YIGOE0 ISSN: 1016-2356

SICI: 1016-2356(19951025)7:5L:481:MCAN;1-H

Material Identity Number: B351-95006

Language: English

Abstract: Three dimensional **modelling** and **simulation** can be applied to complex neurosurgical procedures for enhanced visualization and understanding of abnormal areas requiring surgical intervention and planned interventional paths. This paper presents a simple approach to 3D **modelling** for **computer**-assisted stereotactic neurosurgery. The proposed approach starts with display of 2D CT/MR scan data obtained from conventional imaging systems and provides for storing the data in an efficient format. Image processing techniques are then employed with necessary and appropriate interactive manipulation. The displayed scene consists of brain as well as the trajectory of the **surgical instruments** for stereotactic neurosurgery. Interactive determination of the optimal path of the neurosurgical instruments to access a tumor is achieved by diligently considering avoidance of highly sensitive and critical areas in the brain, and by applying pyramical **modelling** of the unsafe region. The algorithm and software associated with the proposed approach for neurosurgery have been **designed** and implemented on a 486 PC in a windows environment. The system has been tested to **simulate** interactive planning of interventional path for accessing a brain tumor. The low cost and simplicity in **design** lead support to refine the system to overcome platform related computational constraints. In conclusion, the 3D **modelling** plays a role as useful tool in better understanding and planning of surgical procedures.

Subfile: A B C

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28/3,AB/4 (Item 4 from file: 2)
DIALOG(R)File 2:INSPEC
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03711562 INSPEC Abstract Number: B90066180, C90060299

Title: Computer technology for prosthesis production

Journal: IBM Nachrichten vol.40, no.300 p.36-9

Publication Date: March 1990 Country of Publication: West Germany

CODEN: IBMNAQ ISSN: 0018-8662

Language: German

Abstract: Describes the **computer** -aided **design** functions in the German 'AESCULAP' factory producing **surgical instruments** and implants. Details are given of the **design** of hip joints. The production of accurate implants avoids the need for cement corrections, which have a relatively limited life. The process employed is termed '3C' (**computerized** tomography, CAD, and **computer** -aided **manufacture**). Implants can be **simulated** and CAD aids are provided for the orthopaedic surgeon to experiment on **models** , before surgery is carried out.

Subfile: B C

28/3,AB/5 (Item 5 from file: 2)
DIALOG(R)File 2:INSPEC
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

02493648 INSPEC Abstract Number: C85038683

Title: Computer-aided manufacturing of bone models from computer tomography data for use in orthopedic surgery

Author(s): Giebel, G.; Mildenstein, K.; Reumann, K.

Author Affiliation: Unfallchirurgische Klinik, Medizinischen Hochschule Hannover, West Germany

Journal: Biomedizinische Technik vol.30, no.5 p.111-14

Publication Date: May 1985 Country of Publication: West Germany

CODEN: BMZTA7 ISSN: 0013-5585

Language: German

Abstract: **Computer** -aided **manufacturing** of bone **models** from **computer** tomography data is described. These bone **models** represent three-dimensional life-size copies of human bone. The material used can be worked with the usual **surgical instruments** . Operations can therefore be **simulated** on the **model** , for example osteotomies, before being done in the patient.

Subfile: C

28/3,AB/6 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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14114543 BIOSIS NO.: 200300108572

BISTM XP Platform Decreases Electrocautery Artifact and BISTM Blanking during Bispectral IndexTM Monitoring.

AUTHOR: Mathews Donald M(a); Shambroom John R(a); Ghori Khurram M(a); Phan Minh T(a); Neuman George G(a)

AUTHOR ADDRESS: (a)Anesthesiology, St Vincents Catholic Medical Center- St Vincent's Manhattan, New York, NY, USA**USA

JOURNAL: Anesthesiology Abstracts of Scientific Papers Annual Meeting (2002):pAbstract No A-550 2002

MEDIUM: cd-rom

CONFERENCE/MEETING: 2002 Annual Meeting of the American Society of
Anesthesiologists Orlando, FL, USA October 12-16, 2002
SPONSOR: American Society of Anesthesiologists Inc.
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The Bispectral Index™ (BISTM) Monitor (**Model** A-2000, Aspect Medical Systems, Newton, MA) utilizes an EEG derived algorithm to generate the Bispectral Index™. With the traditional BISTM **device**, **surgical** electrocautery (EC) overwhelms the EEG signal and the epoch is rejected as artifactual. The BISTM XP platform features hardware and software changes **designed** to improve the utility of the monitor during EC usage. Specifically, the digital signal converter (DSC) has been redesigned to detect the onset of EC usage and to employ a filtering algorithm that extracts the underlying EEG signal and allows the continued calculation of the BISTM index. This study was undertaken to compare the effects of EC on indices of BISTM performance between the traditional and XP system. **Methods:** Following IRB approval 30 patients were monitored with a BISTM XP platform (A-2000 monitor, DSC-XP, BISTM rev. 4.0 software, BISTM Quattro Sensor, Aspect Medical Systems). EC was utilized as per the surgeon's usual practice. The grounding pad was placed under the patient's torso. The BISTM QUATRO sensor was placed according to **manufacturer** recommendations. Lead impedances were maintained below 15 Kohm, and were typically 5 Kohm. BISTM data and the raw EEG were continuously downloaded into a recording **computer**. The recordings were post-processed by two methods on a second-by-second basis. XP data were extracted directly from the recorded data, determining the presence of EC use, BISTM blanking and BISTM hollowing. The standard system (A-2000 monitor, DSC-2, BISTM rev. 3.4 software, BISTM Sensor) was **simulated** by utilizing the EC detection provided by the DSC-XP to analyze each second for the presence of EC; those seconds containing EC were considered artifactual and BISTM blanking and hollowing were determined with BISTM rev. 3.4 Signal Quality Index (SQI) parameters. The percentage of time determined to be blank, hollow and solid for each platform was compared with paired t testing. The regression lines of percentage of EC use vs. percentage of time blank or hollow were compared with the F value for overall test of coincidence between two lines. Population data between the two groups was compared with the Z-test for a proportion. P of <0.05 was considered significant. **Results:** Significantly fewer patients had BISTM blanking with the XP system compared to the traditional BISTM (p<0.05). There were significant differences in BISTM blanking, hollowing and presentation of solid data when the **simulated** standard A-2000 data were compared to the XP data (p<0.05, 0.005, 0.001, respectively). The regression lines of percentage of EC use vs. percentage of BISTM blanking and hollowing for each platform are presented in the figure. The overall test of coincidence between the regression lines were both significantly different (p<0.0001). **Discussion:** The changes in hardware and software in the BISTM XP platform, compared to the traditional BISTM platform, decreased the amount of BISTM blanking and hollowing and increased the time that a solid number was presented during routine clinical care using EC. Blanking and hollowing were significantly decreased by 77 % and 67%, respectively, which resulted in solid index being generated 97.9 % of the time, a 71% improvement. This indicates that the XP platform increases the utility of the monitor during cases in which EC is utilized.

2002

28/3,AB/7 (Item 1 from file: 34)

John Sims EIC 3700 308-4836

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2003 Inst for Sci Info. All rts. reserv.

10234953 Genuine Article#: 500NC Number of References: 12

Title: Measurements and modelling of the compliance of human and porcine organs (ABSTRACT AVAILABLE)

Author(s): Carter FJ (REPRINT) ; Frank TG; Davies PJ; McLean D; Cuschieri A
Corporate Source: Univ Dundee, Ninewells Hosp & Med Sch, Dept Surg & Mol
Oncol, Level 6/Dundee DD1 9SY//Scotland/ (REPRINT); Univ
Dundee, Ninewells Hosp & Med Sch, Dept Surg & Mol Oncol, Dundee DD1
9SY//Scotland/

Journal: MEDICAL IMAGE ANALYSIS, 2001, V5, N4 (DEC), P231-236

ISSN: 1361-8415 Publication date: 20011200

Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS

Language: English Document Type: ARTICLE

Abstract: Stress-strain data obtained from animal and human tissue have several applications including medical diagnosis, assisting in surgical instrument **design** and the production of realistic **computer**-based **simulators** for training in minimal access surgery. Such data may also be useful for corroborating mathematical **models** of tissue response. This paper presents data obtained from ex-vivo and in-vivo tissue indentation tests using a small indenter that is similar to instruments used in minimal access surgery. In addition, uniform stress tests provide basic material property data, via an exponential stress-strain law, to allow a finite element method to be used to predict the response for the non-uniform stresses produced by the small indenter. Data are obtained from harvested pig liver and spleen using a static compliance probe. Data for human liver are obtained from volunteer patients, undergoing minor open surgery, using a sterile hand-held compliance probe. All the results demonstrate highly non-linear stress-strain behaviour. Pig spleen is shown to be much more compliant than pig liver with mean elastic moduli of 0.11 and 4.0 MPa respectively. The right lobe of human liver had a mean elastic modulus of about 0.27 MPa. However, a single case of a diseased liver had a mean modulus of 0.74 MPa - nearly three times the stiffness. It was found that an exponential stress-strain law could accurately fit uniform stress test data and that subsequent finite element **modelling** for non-uniform stress around a small indenter matched measured force characteristics. (C) 2001 Elsevier Science B.V. All rights reserved.

28/3,AB/8 (Item 2 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2003 Inst for Sci Info. All rts. reserv.

07847729 Genuine Article#: 213TH Number of References: 17

Title: The scientific ground of virtual endoscopy (ABSTRACT AVAILABLE)

Author(s): Coatrieux JL (REPRINT)

Corporate Source: UNIV RENNES 1, INSERM, LAB TRAITEMENT SIGNAL & IMAGE,
CAMPUS BEAULIEU/F-35042 RENNES//FRANCE/ (REPRINT)

Journal: BULLETIN DE L ACADEMIE NATIONALE DE MEDECINE, 1999, V183, N3, P
455-464

ISSN: 0001-4079 Publication date: 19990000

Publisher: ACADEMIE NATL DE MEDECINE, 16 RUE BONAPARTE, 75272 PARIS 06,
FRANCE

Language: French Document Type: ARTICLE

Abstract: The recent advances in medical imaging, the availability of methods for image analysis and **computer** graphics, the technological resources provided by microdevices and the **design** of minimal access surgical procedures have open the road to new concepts. Virtual

endoscopy represents one of these emerging areas and points out the applicative potential of three dimensional (3D) imaging. It leads to less invasive diagnosis and therapeutic achievements and provides important cues for education and interventional planning. Image segmentation, visualization, tissue **modeling** and interactions with **surgical instruments** are the fundamental components to build clinical applications. They are examined in this paper through 3D navigation systems, surgical **simulations** and image guided interventions.

28/3,AB/9 (Item 3 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2003 Inst for Sci Info. All rts. reserv.

00742621 Genuine Article#: ET233 Number of References: 25
Title: RANGE OF MOTION IN TOTAL KNEE ARTHROPLASTY - A COMPUTER-ANALYSIS (Abstract Available)
Author(s): WALKER PS; GARG A
Corporate Source: ROYAL NATL ORTHOPAED HOSP, INST ORTHOPAED, DEPT BIOMED ENGN, BROCKLEY HILL/STANMORE HA7 4LP/MIDDX/ENGLAND/; UNIV COLL & MIDDLESEX HOSP SCH MED, INST ORTHOPAED BIOMED ENGN/STANMORE/MIDDX/ENGLAND/; BRIGHAM & WOMENS HOSP, DEPT ORTHOPAED BIOMECH/BOSTON//MA/02115; MIT, DEPT MECH ENGN/CAMBRIDGE//MA/02139
Journal: CLINICAL ORTHOPAEDICS AND RELATED RESEARCH, 1991, N262, P227-235
Language: ENGLISH Document Type: ARTICLE
Abstract: A three-dimensional **computer model** of the knee was formulated based on sectional and coordinate data from knee specimens. The **model** was consistent with published data in terms of contact points and ligament length patterns. Prosthetic components were **designed**, and surgical placement was **simulated**. Maximum flexion was limited by tension in the posterior cruciate ligament. Increased dishing of the tibial surface reduced flexion, but some dishing was considered necessary for reduction of contact stresses. Anteroposterior translation of the tibial component had little effect on flexion. Femoral translation had some offset, and posterior positioning reduced flexion. The most important surgical variable was tibial component tilt in the sagittal plane. Posterior tilt increased motion, while anterior tilt decreased motion. The results apply to the choice of total knee system, **instrument design**, and **surgical technique**.

28/3,AB/10 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 2003 Elsevier Science B.V. All rts. reserv.

02896489 EMBASE No: 1985140448
Computer aided manufacturing of bone models from computer tomography data for use in orthopedic surgery
DREIDIMENSIONALE KNOCHENMODELLE NACH COMPUTERTOMOGRAPHIE-DATEN. COMPUTER-**DESIGN** UND COMPUTER-FERTIGUNG ZUR OPERATIONSPLANUNG IN CHIRURGIE UND ORTHOPADIE
Mildenstein K.; Giebel G.; Reumann K.
Unfallchirurgische Klinik, Medizinische Hochschule, D-3000 Hannover Germany
Fortschritte der Medizin (FORTSCHR. MED.) (Germany) 1985, 103/13 (331-334)
CODEN: FMDZA
DOCUMENT TYPE: Journal
LANGUAGE: GERMAN SUMMARY LANGUAGE: ENGLISH

Computer aided **manufacturing** of bone **models** from **computer** tomography data is described. These bone **models** represent three dimensional life size copies of human bone. The material used allows one to employ the usual **surgical instruments**. Operations therefore can be **simulated** on the **model** (for example osteotomies) and afterwards transferred to the patient.

28/3,AB/11 (Item 1 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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11922766 99366331 PMID: 10437278

[The scientific bases of virtual endoscopy]

Les bases scientifiques de l'endoscopie virtuelle.

Coatrieux J L

Laboratoire Traitement du Signal et de l'Image, INSERM, Universite de Rennes 1.

Bulletin de l'Academie nationale de medecine (FRANCE) 1999, 183 (3)
p455-64, ISSN 0001-4079 Journal Code: 7503383

Document type: Journal Article; Review; Review, Tutorial ; English
Abstract

Languages: FRENCH

Main Citation Owner: NLM

Record type: Completed

The recent advances in medical imaging, the availability of methods for image analysis and **computer** graphics, the technological resources provided by microdevices and the **design** of minimal access surgical procedures have open the road to new concepts. Virtual endoscopy represents one of these emerging areas and points out the applicative potential of three dimensional (3D) imaging. It leads to less invasive diagnosis and therapeutic achievements and provides important cues for education and interventional planning. Image segmentation, visualization, tissue **modeling** and interactions with **surgical instruments** are the fundamental components to build clinical applications. They are examined in this paper through 3D navigation systems, surgical **simulations** and image guided interventions.

28/3,AB/12 (Item 2 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.

10131018 22108726 PMID: 12114176

Interactive computer simulations of knee-replacement surgery.

Gunther Stephen B; Soto Gabriel E; Colman William W

University of California, San Francisco, 94115-1351, USA.

Academic medicine - journal of the Association of American Medical Colleges (United States) Jul 2002, 77 (7) p753-4, ISSN 1040-2446
Journal Code: 8904605

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

OBJECTIVE: Current surgical training programs in the United States are based on an apprenticeship **model**. This **model** is outdated because it does not provide conceptual scaffolding, promote collaborative learning, or offer constructive reinforcement. Our objective was to create a more useful approach by preparing students and residents for operative cases using

interactive **computer simulations** of surgery. Total-knee-replacement surgery (TKR) is an ideal procedure to **model** on the **computer** because there is a systematic protocol for the procedure. Also, this protocol is difficult to learn by the apprenticeship **model** because of the multiple instruments that must be used in a specific order. We **designed** an interactive **computer** tutorial to teach medical students and residents how to perform knee-replacement surgery. We also aimed to reinforce the specific protocol of the operative procedure. Our final goal was to provide immediate, constructive feedback. DESCRIPTION: We created a **computer** tutorial by generating three-dimensional wire-frame **models** of the **surgical instruments**. Next, we applied a surface to the wire-frame **models** using three-dimensional **modeling**. Finally, the three-dimensional **models** were animated to **simulate** the motions of an actual TKR. The tutorial is a step-by-step tutorial that teaches and tests the correct sequence of steps in a TKR. The student or resident must select the correct instruments in the correct order. The learner is encouraged to learn the stepwise surgical protocol through repetitive use of the **computer simulation**. Constructive feedback is acquired through a grading system, which rates the student's or resident's ability to perform the task in the correct order. The grading system also accounts for the time required to perform the **simulated** procedure. We evaluated the efficacy of this teaching technique by testing medical students who learned by the **computer simulation** and those who learned by reading the surgical protocol manual. Both groups then performed TKR on **manufactured** bone **models** using real instruments. Their technique was graded with the standard protocol. The students who learned on the **computer simulation** performed the task in a shorter time and with fewer errors than the control group. They were also more engaged in the learning process. DISCUSSION: Surgical training programs generally lack a consistent approach to preoperative education related to surgical procedures. This interactive **computer** tutorial has allowed us to make a quantum leap in medical student and resident teaching in our orthopedic department because the students actually participate in the entire process. Our technique provides a linear, sequential method of skill acquisition and direct feedback, which is ideally suited for learning stepwise surgical protocols. Since our initial evaluation has shown the efficacy of this program, we have implemented this teaching tool into our orthopedic curriculum. Our plans for future work with this **simulator** include **modeling** procedures involving other anatomic areas of interest, such as the hip and shoulder.

28/3,AB/13 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.

08266576 94332637 PMID: 8055320

CAD-based graphical computer simulation in endoscopic surgery.

Kuehnepfel U G; Neisius B
Nuclear Research Centre Karlsruhe, Institute for Applied Informatics,
Germany.

Endoscopic surgery and allied technologies (GERMANY) Jun 1993, 1 (3)
p181-4, ISSN 0942-6027 Journal Code: 9412631

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

This article presents new techniques for three-dimensional, kinematic realtime **simulation** of dextrous endoscopic instruments. The integrated **simulation** package KISMET is used for engineering **design** verification and evaluation. Geometric and kinematic **computer models** of the

mechanisms and the laparoscopic workspace were created. Using the advanced capabilities of high-performance graphical workstations combined with state-of-the-art **simulation** software, it is possible to generate displays of the **surgical instruments** acting realistically on the organs of the digestive system. The organ geometry is **modelled** in a high degree of detail. Apart from discussing the use of KISMET for the development of MFM-II (Modular Flexible MIS Instrument, Release II), the paper indicates further applications of realtime 3D graphical **simulation** methods in endoscopic surgery.

?

30/3/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

7569866 INSPEC Abstract Number: C2003-05-7330-010

Title: Intraocular surgery on a virtual eye

Author(s): Wagner, C.; Schill, M.; Manner, R.

Author Affiliation: Inst. for Computational Medicine, Mannheim Univ., Germany

Journal: Communications of the ACM vol.45, no.7 p.45-9

Publisher: ACM,

Publication Date: July 2002 Country of Publication: USA

CODEN: CACMA2 ISSN: 0001-0782

SICI: 0001-0782(200207)45:7L:45:ISV;1-B

Material Identity Number: C056-2002-009

U.S. Copyright Clearance Center Code: 0001-0782/02/\$0700 \$5.00

Language: English

Subfile: C

Copyright 2003, IEE

30/3/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

7417883 INSPEC Abstract Number: C2002-11-7330-481

Title: State-of-the-art in orthopaedic surgical navigation with a focus on medical image modalities

Author(s): Langlotz, F.

Author Affiliation: Maurice E. Muller Inst. for Biomech., Bern Univ., Switzerland

Journal: Journal of Visualization and Computer Animation vol.13, no.1 p.77-83

Publisher: Wiley,

Publication Date: Feb. 2002 Country of Publication: UK

CODEN: JVCAEO ISSN: 1049-8907

SICI: 1049-8907(200202)13:1L:77:SOSN;1-K

Material Identity Number: O582-2002-003

U.S. Copyright Clearance Center Code: 1049-8907/02/\$30.00

Language: English

Subfile: C

Copyright 2002, IEE

30/3/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6991745 INSPEC Abstract Number: C2001-09-7330-136

Title: A MRI based semi-automatic modeling system for computational biomechanics simulation

Author(s): Hayasaka, T.; Hao Liu; Himeno, R.; Yamaguchi, T.

Author Affiliation: Div. of Comput. & Inf.; Inst. of Phys. & Chem. Res., Wako, Japan

Conference Title: Proceedings International Workshop on Medical Imaging and Augmented Reality p.282-5

Publisher: IEEE Computer. Soc, Los Alamitos, CA, USA

Publication Date: 2001 Country of Publication: USA. xii+306 pp.

ISBN: 0 7695 1113 9 Material Identity Number: XX-2001-01281

U.S. Copyright Clearance Center Code: 0 7695 1113 9/2001/\$10.00

Conference Title: Proceedings International Workshop on Medical Imaging

and Augmented Reality

Conference Sponsor: Siemens Med. Syst.; Marconi Med. Syst.; Eur.-Chinese Soc. Clinical Magnetic Resonance; Surgi-Vision; Royal Soc./Wolfson Med. Image Comput. Lab., Imperial College; Cardiovascular Magnetic Resonance Unit, Royal Brompton Hospital; IEEE Eng. Med. & Biology Soc.; Eurographics Assoc.; Int. Soc. Magnetic Resonance in Med. (ISMRM); Visual Inf. Process. Group, Imperial College; Virtual Reality, Visualization & Imaging Res. Center, CUHK

Conference Date: 10-12 June 2001 Conference Location: Shatin, Hong Kong, China

Language: English

Subfile: C

Copyright 2001, IEE

30/3/4 (Item 4 from file: 2)

DIALOG(R) File 2:INSPEC

(c) 2003 Institution of Electrical Engineers.. All rts. reserv.

6957557 INSPEC Abstract Number: C2001-07-7330-286

Title: An augmented reality navigation system for computer assisted arthroscopic surgery of the knee

Author(s): Tonet, O.; Megali, G.; D'Attanasio, S.; Dario, P.; Carrozza, M.C.; Marcacchi, M.; Martelli, S.; La Palombara, P.F.

Author Affiliation: MiTech Lab., Scuola Superiore Sant'Anna, Pisa, Italy

Conference Title: Medical Image Computing and Computer-Assisted Intervention - MICCAI 2000. Third International Conference. Proceedings (Lecture Notes in Computer Science Vol.1935) p.1158-62

Editor(s): Delp, S.L.; DiGioia, A.M.; Jaramaz, B.

Publisher: Springer-Verlag, Berlin, Germany

Publication Date: 2000 Country of Publication: Germany xxv+1244 pp.

ISBN: 3 540 41189 5 Material Identity Number: XX-2001-00241

Conference Title: Medical Image Computing and Computer-Assisted Intervention - MICCAI 2000. Third International Conference. Proceedings

Conference Date: 11-14 Oct. 2000 Conference Location: Pittsburgh, PA, USA

Language: English

Subfile: C

Copyright 2001, IEE

30/3/5 (Item 5 from file: 2)

DIALOG(R) File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6950324 INSPEC Abstract Number: A2001-14-8770G-003, B2001-07-7520-013, C2001-07-7330-229

Title: A novel navigation system for computer assisted orthopaedic surgery

Author(s): Tonet, O.; Megali, G.; Dario, P.; Carrozza, M.C.; Marcacchi, M.; La Palombara, P.F.

Author Affiliation: MiTech Lab., Scuola Superiore Sant'Anna, Pisa, Italy

Conference Title: Proceedings of the 22nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (Cat. No.00CH37143) Part vol.3 p.1864-5 vol.3

Editor(s): Enderle, J.D.

Publisher: IEEE, Piscataway, NJ, USA

Publication Date: 2000 Country of Publication: USA 4 vol. xxiii+3272 pp.

ISBN: 0 7803 6465 1 Material Identity Number: XX-2001-00102

U.S. Copyright Clearance Center Code: 0 7803 6465 1/2000/\$10.00

Conference Title: Proceedings of the 22nd Annual International Conference
of the IEEE Engineering in Medicine and Biology Society
Conference Date: 23-28 July 2000 Conference Location: Chicago, IL, USA
Language: English
Subfile: A B C
Copyright 2001, IEE

30/3/6 (Item 6 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

5729737 INSPEC Abstract Number: C9712-7330-063

**Title: Real-time volume visualization of medical image data for diagnostic
and navigational purposes in computer aided surgery**

Author(s): Hubner, M.; Kuhnappel, U.G.

Author Affiliation: Inst. fur Angewandte Inf., Forschungszentrum
Karlsruhe GmbH, Germany

Conference Title: CAR '96 Computer Assisted Radiology. Proceedings of the
International Symposium on Computer and Communication Systems for Image
Guided Diagnosis and Therapy p.751-6

Editor(s): Lemke, H.U.; Vannier, M.W.; Inamura, K.; Farman, A.G.

Publisher: Elsevier, Amsterdam, Netherlands

Publication Date: 1996 Country of Publication: Netherlands xxxv+1112
pp.

ISBN: 0 444 82497 9 Material Identity Number: XX96-02119

Conference Title: Proceedings of CAR'96: Computer Assisted Radiology-10th
International Symposium

Conference Date: June 1996 Conference Location: Paris, France

Language: English

Subfile: C

Copyright 1997, IEE

30/3/7 (Item 7 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

5728227 INSPEC Abstract Number: A9723-8770G-001, B9712-7520-001,
C9712-7330-027

**Title: A non-invasive patient registration and reference system for
interactive intraoperative localization in intranasal sinus surgery**

Author(s): Hauser, R.; Westermann, B.; Probst, R.

Author Affiliation: Dept. of Otorhinolaryngology, Basel Univ.,
Switzerland

Journal: Proceedings of the Institution of Mechanical Engineers, Part H
(Journal of Engineering in Medicine) vol.211, no.H4 p.327-34

Publisher: Mech. Eng. Publications,

Publication Date: 1997 Country of Publication: UK

CODEN: PIHMEQ ISSN: 0954-4119

SICI: 0954-4119(1997)211:H4L:327:IPRR;1-K

Material Identity Number: N671-97005

Language: English

Subfile: A B C

Copyright 1997, IEE

30/3/8 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2003 BIOSIS. All rts. reserv.

13966431 BIOSIS NO.: 200200595252

Interactive computer **-assisted surgical system and method thereof.**

AUTHOR: Brosseau Eric(a); Boivin Michel; Hamel Genevieve; Amiot

Louis-Philippe

AUTHOR ADDRESS: (a)Montreal**Canada

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1262 (3):pNo Pagination Sep. 17, 2002

MEDIUM: e-file

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

30/3/9 (Item 2 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2003 BIOSIS. All rts. reserv.

13652478 BIOSIS NO.: 200200281299

Automatic analysis in virtual endoscopy.

AUTHOR: Vining David J(a); Hunt Gordon W; Ahn David K; Stelts David R; Ge
Yaorong; Hemler Paul F; Salido Tiffany W

AUTHOR ADDRESS: (a)Winston-Salem, NC**USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1257 (1):pNo Pagination Apr. 2, 2002

MEDIUM: e-file

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

30/3/10 (Item 3 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2003 BIOSIS. All rts. reserv.

12533880 BIOSIS NO.: 200000287382

Real-time image-guided placement of anchor devices.

AUTHOR: VomLehn John Christian(a); Carl Allen Lawrence; Khanuja Harpal
Singh

AUTHOR ADDRESS: (a)Albany, NY**USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1228 (1):pNo pagination Nov. 2, 1999

MEDIUM: e-file.

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

30/3/11 (Item 1 from file: 6)

DIALOG(R)File 6:NTIS

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2259367 NTIS Accession Number: ADA410205/XAB

Interactive **Medical Volume Visualization for Surgical Operations**

Ozkurt, A. ; Oz Mehmet, K.

Dokuz Eylul Univ., Izmir (Turkey). Dept. of Electrical and Electronics.

Corp. Source Codes: 081686004; 442212

25 Oct 2001 5p

Languages: English

John Sims EIC 3700 308-4836

Journal Announcement: USGRDR0313

Papers from 23rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, October 25-28, 2001, held in Istanbul, Turkey. See also ADM001351 for entire conference on cd-rom., The original document contains color images.

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NTIS Prices: PC A01/MF A01

30/3/12 (Item 2 from file: 6)

DIALOG(R)File 6:NTIS

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2197306 NTIS Accession Number: ADP010611/XAB

Training Minimal Access Surgery Skills Within a Virtual Environment

Kelly, M.

Ministry of Defence, London (England).

Corp. Source Codes: 002020000; 401566

1 Nov 2000 5p

Languages: English Document Type: Conference proceeding

Journal Announcement: USGRDR0116

Presented at the RTO Human Factors and Medicine Panel Workshop, Orlando FL, 5-9 Dec 1997, p3-1/3-5. This article is from ADA388966 The Capability of Virtual Reality to Meet Military Requirements (la Capacite de la realite virtuelle a repondre aux besoins militaires).

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NTIS Prices: PC A01/MF A01

30/3/13 (Item 1 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

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05365370 E.I. No: EIP99094789950

Title: Interaction model for 3D cutting in maxillofacial surgery planning

Author: Neumann, Patrick; Siebert, Dirk; Schulz, Armin; Faulkner, Gabriele; Krauss, Manfred; Tolxdorff, Thomas

Corporate Source: Free Univ Berlin, Berlin, Ger

Conference Title: Proceedings of the 1999 Medical Imaging - Image Display

Conference Location: San Diego, CA, USA Conference Date: 19990221-19990223

E.I. Conference No.: 55282

Source: Proceedings of SPIE - The International Society for Optical Engineering v 3658 1999. p 324-331

Publication Year: 1999

CODEN: PSISDG ISSN: 0277-786X

Language: English

30/3/14 (Item 2 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

05105909 E.I. No: EIP98084355477

John Sims EIC 3700 308-4836

Title: Increasing Spiral CT benefits with postprocessing applications

Author: Kirchgeorg, Markus A.; Prokop, Mathias

Corporate Source: Siemens Medical Systems Ultrasound Group, Issaquah, WA, USA

Source: European Journal of Radiology v 28 n 1 Aug 1998. p 39-54

Publication Year: 1998

CODEN: EJRADR ISSN: 0720-048X

Language: English

30/3/15 (Item 3 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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04946430 E.I. No: EIP97083775172

Title: Surface reconstruction and visualization of the surgical prostate model

Author: Xuan, Jianhua; Sesterhenn, Isabell A.; Hayes, Wendelin S.; Wang, Yue; Adali, Tulay; Yagi, Yukako; Freedman, Matthew T. M.D.; Mun, Seong K.

Corporate Source: Georgetown Univ. Medical Cent. and Univ. of Maryland/Baltimore County, Baltimore, MD, USA

Conference Title: Medical Imaging 1997: Image Display

Conference Location: Newport Beach, CA, USA Conference Date: 19970223-19970225

E.I. Conference No.: 23008

Source: Proceedings of SPIE - The International Society for Optical Engineering v 3031 1997. Society of Photo-Optical Instrumentation Engineers, Bellingham, WA, USA. p 50-61

Publication Year: 1997

CODEN: PSISDG ISSN: 0277-786X ISBN: 0-8194-2442-0

Language: English

30/3/16 (Item 4 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

03747663 E.I. No: EIP93111129377

Title: Climbing CAD's learning curve

Author: Dvorak, Paul; Teschler, Leland

Source: Machine Design v 65 n 18 Sep 10 1993. p 52-55

Publication Year: 1993

CODEN: MADEAP ISSN: 0024-9114

Language: English

30/3/17 (Item 1 from file: 34)

DIALOG(R)File 34: SciSearch(R) Cited Ref Sci

(c) 2003 Inst for Sci Info. All rts. reserv.

10038057 Genuine Article#: 478AK No. References: 13

Title: Robotically assisted laparoscopic cholecystectomy - A pilot study

Author(s): Lomanto D (REPRINT); Cheah WK; So JB; Goh PM

Corporate Source: Univ Roma La Sapienza, Div Gen Surg 2, Dept Gen Surg Surg Specialty & Organ Transplantat, Policlin Umb, Viale Policlin 155/I-00161 Rome//Italy/ (REPRINT); Natl Univ Singapore, Dept Surg, Minimally Invas Surg Ctr, Natl Univ Singapore Hosp, Singapore 0511//Singapore/

Journal: ARCHIVES OF SURGERY, 2001, V136, N10 (OCT), P1106-1108

ISSN: 0004-0010 Publication date: 20011000

Publisher: AMER MEDICAL ASSOC, 515 N STATE ST, CHICAGO, IL 60610 USA

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

30/3/18 (Item 2 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2003 Inst for Sci Info. All rts. reserv.

06618140 Genuine Article#: ZF139 No. References: 10

Title: Virtual reality training simulator for endonasal surgery

Author(s): Hilbert M (REPRINT) ; Muller W; Strutz J

Corporate Source: UNIV REGENSBURG,HALS NASEN OHREN KLIN, FJ STR ALLEE
11/D-93043 REGENSBURG//GERMANY/ (REPRINT)

Journal: LARYNGO-RHINO-OTOLOGIE, 1998, V77, N3 (MAR), P153-156

ISSN: 0935-8943 Publication date: 19980300

Publisher: GEORG THIEME VERLAG, P O BOX 30 11 20, D-70451 STUTTGART,
GERMANY

Language: German Document Type: ARTICLE (ABSTRACT AVAILABLE)

30/3/19 (Item 1 from file: 73)

DIALOG(R)File 73:EMBASE

(c) 2003 Elsevier Science B.V. All rts. reserv.

11948244 EMBASE No: 2003060059

Design and implementation of a PC-based image-guided surgical system

Stefansic J.D.; Bass W.A.; Hartmann S.L.; Beasley R.A.; Sinha T.K.; Cash
D.M.; Herline A.J.; Galloway Jr. R.L.

R.L. Galloway Jr., Department of Biomedical Engineering, Vanderbilt
University, Box 351653, Nashville, TN 37235 United States

AUTHOR EMAIL: bob.galloway@vanderbilt.edu

Computer Methods and Programs in Biomedicine (COMPUT. METHODS PROGRAMS
BIOMED.) (Ireland) 2002, 69/3 (211-224)

CODEN: CMPBE ISSN: 0169-2607

PUBLISHER ITEM IDENTIFIER: S0169260701001924

DOCUMENT TYPE: Journal ; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 25

30/3/20 (Item 2 from file: 73)

DIALOG(R)File 73:EMBASE

(c) 2003 Elsevier Science B.V. All rts. reserv.

07725916 EMBASE No: 1999202462

**Image guided surgery: Preliminary feasibility studies of frameless
stereotactic liver surgery**

Herline A.J.; Stefansic J.D.; Debelak J.P.; Hartmann S.L.; Pinson C.W.;
Galloway R.L.; Chapman W.C.; Goodnight J.E. Jr.; Stain S.C.; Peters J.H.;
Weigelt J.A.

Dr. W.C. Chapman, Vanderbilt University Medical Center, 801 Oxford House,
Nashville, TN 37232-4753 United States

AUTHOR EMAIL: will.chapman@surgery.mc.vanderbilt.edu

Archives of Surgery (ARCH. SURG.) (United States) 1999, 134/6
(644-650)

CODEN: ARSUA ISSN: 0004-0010

DOCUMENT TYPE: Journal; Conference Paper

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 17

30/3/21 (Item 3 from file: 73)

DIALOG(R)File 73:EMBASE

John Sims EIC 3700 308-4836

(c) 2003 Elsevier Science B.V. All rts. reserv.

07724516 EMBASE No: 1999200931

Robotic-assisted laparoscopic pyeloplasty: A pilot study

Gyung Tak Sung; Gill I.S.; Hsu T.H.S.

Dr. I.S. Gill, Lap./Minimally Invasive Surg. Sec., Department of Urology,
Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44195
United States

Urology (UROLOGY) (United States) 1999, 53/6 (1099-1103)

CODEN: URGYA ISSN: 0090-4295

PUBLISHER ITEM IDENTIFIER: S0090429599000308

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 18

30/3/22 (Item 4 from file: 73)

DIALOG(R)File 73:EMBASE

(c) 2003 Elsevier Science B.V. All rts. reserv.

07650031 EMBASE No: 1999131794

In vivo determination of condylar lift-off and screw-home in a mobile-bearing total knee arthroplasty

Stiehl J.B.; Dennis D.A.; Komistek R.D.; Crane H.S.

Dr. J.B. Stiehl, 2015 E. Newport, Milwaukee, WI 53211 United States

Journal of Arthroplasty (J. ARTHROPLASTY) (United States) 1999, 14/3
(293-299)

CODEN: JOARE ISSN: 0883-5403

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 21

30/3/23 (Item 5 from file: 73)

DIALOG(R)File 73:EMBASE

(c) 2003 Elsevier Science B.V. All rts. reserv.

07393137 EMBASE No: 1998264062

Virtual reality: Preparation and execution of sinus surgery

Ecke U.; Klimek L.; Muller W.; Ziegler R.; Mann W.

Dr. U. Ecke, Dept. of Otolaryngol. Hd./Neck Surg., Mainz Medical School,
Langenbeckstr. 1, 55101 Mainz Germany

Computer Aided Surgery (COMPUT. AIDED SURG.) (United States) 1998, 3/1
(45-50)

CODEN: CAISF ISSN: 1092-9088

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 18

30/3/24 (Item 1 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 2003 The Dialog Corp. All rts. reserv.

11358382 98238794 PMID: 9577822

[Development of a surgical simulator for interventions of the paranasal sinuses. Technical principles and initial prototype]

Entwicklung eines Operationssimulators für Eingriffe an den
Nasennebenhöhlen. Technische Grundlagen und erste Realisation.

Hilbert M; Muller W; Strutz J

John Sims EIC 3700 308-4836

Hals-Nasen-Ohrenklinik, Universitat Regensburg.
Laryngo- rhino- otologie (GERMANY) Mar 1998, 77 (3) p153-6, ISSN
0935-8943 Journal Code: 8912371
Document type: Journal Article ; English Abstract
Languages: GERMAN
Main Citation Owner: NLM
Record type: Completed

30/3/25 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.

09444299 21216091 PMID: 11317798
3-D simulation of craniofacial surgical procedures.
Teschner M; Girod S; Girod B
Telecommunications Laboratory, University Erlangen, Germany.
teschner@LNT.de
Studies in health technology and informatics (Netherlands) 2001, 81
p502-8, ISSN 0926-9630 Journal Code: 9214582
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

30/3/26 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.

09019477 20312922 PMID: 10853061
Interactive image-guided surgery system with high-performance computing capabilities on low-cost workstations: a prototype.
Roldan P; Barcia-Salorio J L; Talamantes F; Alcaniz M; Grau V; Monserrat C; Juan C
Division of Neurosurgery, University Clinic Hospital, Valencia, Spain.
pedro.rolدان@uv.es
Stereotactic and functional neurosurgery (SWITZERLAND) 1999, 72 (2-4)
p112-6, ISSN 1011-6125 Journal Code: 8902881
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

30/3/27 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.

07683419 93138668 PMID: 1487285
Interactive image-guided neurosurgery.
Galloway R L; Maciunas R J; Edwards C A
Department of Biomedical Engineering, Vanderbilt University, Nashville, TN
37235.
IEEE transactions on bio-medical engineering (UNITED STATES) Dec 1992,
39 (12) p1226-31, ISSN 0018-9294 Journal Code: 0012737
Contract/Grant No.: SB 1 R29 NS28602-01; NS; NINDS
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

35/3/4 (Item 2 from file: 73)

DIALOG(R)File 73:EMBASE

(c) 2003 Elsevier Science B.V. All rts. reserv.

04331564 EMBASE No: 1990219627

From computer tomography to organ model . A new instrument for surgical and orthopedic specialists

VON DER COMPUTERTOMOGRAPHIE ZUM ORGANMODELL. EIN NEUES INSTRUMENT FUR CHIRURGEN UND ORTHOPADEN

Kliegis U.

Duppelstr. 71, 2000 Kiel 1 Germany

Medizintechnik (MEDIZINTECHNIK) (Germany) 1990, 110/3 (85-88)

CODEN: MDZND ISSN: 0344-9416

DOCUMENT TYPE: Journal; Short Survey

LANGUAGE: GERMAN

35/3/5 (Item 1 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 2003 The Dialog Corp. All rts. reserv.

14088619 22163478 PMID: 12173880

Task decomposition of laparoscopic surgery for objective evaluation of surgical residents' learning curve using hidden Markov model.

Rosen Jacob; Solazzo Massimiliano; Hannaford Blake; Sinanan Mika; et al
Department of Electrical Engineering, University of Washington, Seattle
98195, USA. rosen@u.washington.edu

Computer aided surgery - official journal of the International Society
for Computer Aided Surgery (United States) 2002, 7 (1) p49-61, ISSN
1092-9088 Journal Code: 9708375

Document type: Evaluation Studies; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

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18/7/15 (Item 15 from file: 16)
DIALOG(R) File 16:Gale Group PROMT(R)
(c) 2003 The Gale Group. All rts. reserv.

03305386 Supplier Number: 44564221
High tech takes on medical manufacturing
Tooling & Production, p51
April, 1994

ABSTRACT:

Growth in the medical equipment **manufacturing** market is a result of demand for less-invasive **surgical instruments** and disposable products, such as plastic instruments or latex rubber gloves. Alternate site surgery practices are also increasing the demand for medical instruments, furniture and lighting. Moreover, the aging population will require more diagnostic and monitoring tests. National health coverage will also increase the need for services. One new device, developed by Intergraph and DoverSystems, uses human **computer - aided design** (HCAD), according to Ken Cayton, executive director of medical systems, Intergraph. HCAD, which combines anatomical images and **computer - aided . design**, can be useful in designing products for use with the human body. These applications include prosthetic devices, bone replacements, medical implants, contact lenses, hearing aids, wheelchairs and surgical tools.

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18/7/24 (Item 7 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2003 The Gale Group. All rts. reserv.

08029933 SUPPLIER NUMBER: 17365534 (THIS IS THE FULL TEXT)
Dynamic Computer Resources, Inc. uses I-DEAS Master Series software for computer-aided surgical planning and medical manufacturing.
Business Wire, p7271286
July 27, 1995

TEXT:

MILFORD, Ohio--(BUSINESS WIRE)--July 27, 1995--Structural Dynamics Research Corporation (Nasdaq: SDRC) announced today that Dynamic Computer Resources, Inc. (DCR), provides a turnkey solution for surgical planning and medical manufacturing. Three-dimensional volumetric model data generated by medical imaging software is processed by DCR's data conversion programs and exported to I-DEAS Master Series(TM) software. The I-DEAS solid models help surgeons visualize patient information in preparation for orthopedic surgery.

Rick Ingram, DCR's vice-president of engineering, says, "The software to convert magnetic resonance imaging (MRI) or computed tomography (CT) scans of the human body into 3D models has been available for some time. Our system now makes it possible for surgeons and **manufacturers** of implants and prostheses to use this data with state-of-the-art **computer - aided design** and **manufacturing** software. This process generates 3D solid models that help users plan surgical procedures or to **design** products, such as artificial limbs or **surgical devices**."

Surgeons can now take full advantage of the design tools available in I-DEAS Master Series to plan an operation. For example, a 3D solid model of a leg bone can be studied and manipulated on-screen to investigate optimal surgical procedures. A library of plates, pins, screws, and other surgical hardware can be applied to the patient model. This is a tremendous improvement over the traditional 2D engineering approach of marking up X-rays.

According to Dr. Richard A. K. Reynolds, assistant professor of orthopedics at the USC school of medicine and orthopedic surgeon at Children's Hospital Los Angeles, "We use the I-DEAS system as a pre-operative planner. The technology provides several advantages over current methods. First, surgeons and other health care professionals can now work with 3D representations which greatly improves decision-making. Second, the system helps users determine surgical outcomes.

"In neuromuscular disorders, for instance, there are often angular or rotational abnormalities which affect gait. With the pre-operative planner, we can now determine the best method of correcting the bony deformity and be able to predict post-operative gait implications. Using a custom made model of the lower extremities and pelvis, surgeons can now determine the kinetics and kinematics of the lower extremity in each individual and then animate a 3D model to give a visual representation of pre and post-operative gaits."

18/3,KWIC/31 (Item 14 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB

(c)2003 The Gale Group. All rts. reserv.

07175738 SUPPLIER NUMBER: 15050538 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Medical imaging and CAD unite. (computer - aided design) (CAE in Action)

Kempfer, Lisa

Computer-Aided Engineering, v13, n1, p20(1)

Jan, 1994

ISSN: 0733-3536

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 455

LINE COUNT: 00037

Medical imaging and CAD unite. (computer - aided design) (CAE in Action)

ABSTRACT: Surgicad Corp and Intergraph's SurgiCAD **Design** program applies new technology to the **design** of artificial joints and prosthetics. The software, jointly developed by the two companies, combines medical imaging and **computer - aided design** (CAD) to develop solid models of anatomical structures. Data from computed tomography (CAT scans), magnetic resonance imaging (MRI) and ultrasound systems is combined with human anatomical data to provide new opportunities in radiology, orthopedic surgery and the **manufacture** of implant devices. SurgiCAD **Design** runs on Intergraph 2000 and 6000 systems, and Sun Sparcstation workstations. The models can be manipulated and provide accurate geometric relationships and measurements. The software...

Enter SurgiCAD **Design** . It enables users to create solid models of anatomical structures using human anatomical and physiological digital data from computed tomography (CAT scans), magnetic resonance imaging (MRI), and ultrasound. The merging of these technologies opens new opportunities in orthopedic **surgery** , radiology, and implant **device manufacturing** , says Dr. Shawn Hayden, Surgicad's CEO. He explains that the software allows medical device **manufacturers** , biomechanical engineers, researchers, and orthopedic surgeons to use solid models to determine the relationship between bone and device for a better fit. The software offers...

18/3,KWIC/32 (Item 15 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB

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06795067 SUPPLIER NUMBER: 14807903 (USE FORMAT 7 OR 9 FOR FULL TEXT)

CAD and medical imaging: a perfect fit. (computer - aided design)

Phillips Mahoney, Diana

Computer Graphics World, v16, n12, p67(2)

Dec, 1993

ISSN: 0271-4159

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 830

LINE COUNT: 00063

CAD and medical imaging: a perfect fit. (computer - aided design)

...ABSTRACT: are being integrated more commonly in the medical field for use in medical education, treatment analysis and surgical planning. DePuy Inc uses Intergraph's Surgicad **Design** software to determine the fit of its surgical implants for individual patients for total hip, shoulder, knee and extremity replacements. The software generates NURBS-based models of the **computer - aided design** (CAD) information of various implant models and anatomical data collected from the patient's CT scan. Using this software, surgeons can choose better-fitting implant...

Similarly, **computer - aided design** and **manufacturing** technology has played an important role in the medical field in terms of the development and production of prosthetic **devices** and **surgical** implants.

DePuy Inc., a Warsaw, Indiana-based supplier of orthopaedic implants and related products, relies on the benefits of both technologies in its effort to...

18/3,KWIC/33 (Item 16 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2003 The Gale Group. All rts. reserv.

06744821 SUPPLIER NUMBER: 14556501 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Climbing CAD's learning curve. (computer-aided designing) (includes related article)

Dvorak, Paul; Teschler, Leland
Machine Design, v65, n18, p52(6)
Sept 10, 1993

ISSN: 0024-9114 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 3766 LINE COUNT: 00295

ABSTRACT: Two medium-sized companies specializing in different fields have resorted to the use of **computer - aided design** (CAD) systems to compliment their human capital and achieve better leverage against larger and well-financed rivals. The companies, namely: STERIS Corp and Loopco Industries...

... sealed chamber until the instruments come clean.

The geometry of the sterilizing compartment itself is critically important because it plays a major role in getting **surgical instruments** sterile. To ensure a thorough washing, Steris designs adapters and holders for the minimally invasive **surgical instruments**, such as endoscopes, to be treated in its apparatus. Initially, this **design** process was a time-consuming cut-and-try type of endeavor. And in the fast-moving medical **instrument** field, new **surgical devices** come to market at a rapid pace. So that its compartment **design** efforts could keep up, Steris found it needed help in the form of a solid-modeling package.

"One holder took too long -- about 18 months...

DESCRIPTORS: **Computer - aided design --**

18/3,KWIC/34 (Item 17 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2003 The Gale Group. All rts. reserv.

06474146 SUPPLIER NUMBER: 13790074 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Replacing parts on nature's machines. (computer-aided biomechanical engineering)

Puttre, Michael
Mechanical Engineering-CIME, v115, n5, p58(4)
May, 1993

ISSN: 0025-6501 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1613 LINE COUNT: 00131

ABSTRACT: Prosthesis industry biomechanical engineers are using computerized systems, similar to those used by automobile industry mechanical engineers, to **design**, analyse and **manufacture** orthotics, prostheses and **instruments** used for **surgical** implantation. Computer software companies are working with biomechanical engineers to develop CAD/CAM software for prosthesis and **surgical instrument manufacturers**

. New prosthesis CAD/CAM systems improve implanted devices and enhance human body adaption to them.

The idea that a car door panel is analogous to a hip replacement implant might draw skepticism. However, **manufacturers** of parts designed for the human body are in fact using many of the engineering tools common in the automobile industry and in other mechanical engineering applications. Specifically, **computer - aided design** has become effective when fitting man-made parts to the most complex of nature's machines: the human body.

According to Mark Luedtke, associate manufacturing...

...corners or sharp edges in the human anatomy," he noted. Because of this, the company selected CAD systems with solid and surface modeling capabilities.

Orthomet **design** engineers also develop medical **instruments** that support implant **surgery**. Since every implant requires special instruments used by the surgeon, these are often designed along with the part. Orthomet designs its instruments using the Personal...

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Set	Items	Description
S1	10	AU='CUNNINGHAM R L'
S2	5	AU='MERRIL G L'
S3	137	AU='BROWN J M'
S4	1	E3,E4
S5	6	AU='FELDMAN P G'
S6	1	AU='TASTO J L'
S7	5	S1 AND S2:S6
S8	4	S2 AND S3:S6
S9	1	S3 AND S4:S6
S10	0	S4 AND S5:S6
S11	1	S5 AND S6
S12	6	S7:S11
S13	20681	INTERACTIV?
S14	636213	COMPUTER
S15	100690	MODEL?
S16	35610	HEART
S17	20	(S13 OR S14) (S)S15(S)S16
S18	20	S17 NOT S12
S19	2676	COMPUTER?(3N)MODEL?
S20	42147	SURGIC?
S21	5159417	INSTRUMENT? ? OR DEVICE? ?
S22	6	S19(S)S20(S)S21
S23	6	S22 NOT (S18 OR S12)

? show files

File 347:JAPIO Oct 1976-2003/May(Updated 030902)

(c) 2003 JPO & JAPIO

File 350:Derwent WPIX 1963-2003/UD,UM &UP=200356

(c) 2003 Thomson Derwent

File 371:French Patents 1961-2002/BOPI 200209

(c) 2002 INPI. All rts. reserv.

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Set	Items	Description
S1	4	AU='CUNNINGHAM RICHARD':AU='CUNNINGHAM RICHARD L'
S2	3	AU='MERRIL GREGORY L'
S3	1	AU='BROWN J MICHAEL'
S4	1	AU='CONNACHER HUGH'
S5	3	AU='FELDMAN PHILIP':AU='FELDMAN PHILIP G'
S6	66	PA=IMMERSION
S7	66	IMMERSION/PA
S8	2	S1 AND S2:S6
S9	3	S2 AND S3:S6
S10	0	S3 AND S4:S6
S11	0	S4 AND S5:S6
S12	0	(S1:S5) AND S6
S13	3	S8:S9
S14	12060	INTERACTIV?
S15	121224	COMPUTER?
S16	16946	HEART
S17	3557	SURGIC?(3N)(INSTRUMENT? ? OR DEVICE? ?)
S18	10	S14(S)S15(S)(S16 OR S17)
S19	10	S18 NOT S13

? show files

File 348:EUROPEAN PATENTS 1978-2003/Aug W05

(c) 2003 European Patent Office

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Set	Items	Description
S1	11687	COMPUTER()AIDED()DESIGN OR CAD
S2	2289	COMPUTER? ?(3N) (MODEL OR MODELING OR MODELLING)
S3	53009	SURGERY OR SURGICAL
S4	634	HAPTIC
S5	13758	S1:S2
S6	1	S3 AND S4 AND S5

? show files

File 350:Derwent WPIX 1963-2003/UD,UM &UP=200357
(c) 2003 Thomson Derwent

File 347:JAPIO Oct 1976-2003/May(Updated 030902)
(c) 2003 JPO & JAPIO

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Set	Items	Description
S1	202865	COMPUTER()AIDED()DESIGN OR CAD
S2	108383	COMPUTER? ?(3N)(MODEL OR MODELING OR MODELLING)
S3	33750	(SURGERY OR SURGICAL)(3N)(DEVICE? ? OR INSTRUMENT? ?)
S4	2137438	SIMULAT?
S5	178876	INTERACTIVE OR INTER()ACTIVE
S6	3833085	DESIGN??
S7	6437	HAPTIC?
S8	734380	MANUFACTUR?
S9	0	S1 AND S3 AND S4 AND S5 AND S6 AND S7 AND S8
S10	0	S1 AND S3 AND S4 AND S5 AND S7
S11	1164	S4 AND S7
S12	306851	S1 OR S2
S13	1563	S6 AND S7
S14	75	S11 AND S12
S15	106	S13 AND S12
S16	121	S14 OR S15
S17	0	S3 AND S16
S18	26	S8 AND S16
S19	121	S16
S20	96	RD (unique items)
S21	76	S20 AND PY<2002
S22	4830585	SURGERY OR SURGICAL
S23	10	S21 AND S22
S24	66	S21 NOT S23

? show files

File 2:INSPEC 1969-2003/Aug W5
(c) 2003 Institution of Electrical Engineers

File 5:Biosis Previews(R) 1969-2003/Aug W5
(c) 2003 BIOSIS

File 6:NTIS 1964-2003/Sep W1
(c) 2003 NTIS, Intl Cpyrght All Rights Res

File 8:Ei Compendex(R) 1970-2003/Aug W5
(c) 2003 Elsevier Eng. Info. Inc.

File 34:SciSearch(R) Cited Ref Sci 1990-2003/Aug W5
(c) 2003 Inst for Sci Info

File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
(c) 1998 Inst for Sci Info

File 73:EMBASE 1974-2003/Aug W5
(c) 2003 Elsevier Science B.V.

File 155:MEDLINE(R) 1966-2003/Sep W1
(c) format only 2003 The Dialog Corp.

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Set	Items	Description
S1	2966841	COMPUTER?
S2	188152	INTERACTIV?
S3	192	INTER()ACTIVE
S4	7710258	MODEL?
S5	2079738	HEART
S6	33742	(SURGICAL OR SURGERY) (3N) (INSTRUMENT? ? OR DEVICE? ?)
S7	375	S1 AND (S2:S3) AND S4 AND (S5:S6)
S8	2403	S5 AND S6
S9	0	S1 AND (S2:S3) AND S4 AND S8
S10	0	S1 AND S2 AND S3 AND S4 AND S5
S11	331	S1 AND (S2:S3) AND S4 AND S5
S12	44	S1 AND (S2:S3) AND S4 AND S6
S13	31	RD (unique items)
S14	13	S1(3N) (S2:S3) (2N) S4(3N) S5
S15	0	S1(3N) (S2:S3) (3N) S4(3N) S6
S16	13	S14
S17	6	RD (unique items)
S18	15	S1(3N) S4(3N) S6
S19	2134663	SIMULAT?
S20	6	S18 AND S19
S21	6	RD (unique items)
S22	6	S21 NOT S17
S23	45	S1(S) S4(S) S6(S) S19
S24	733848	MANUFACTUR?
S25	4131888	DESIGN?
S26	18	S23 AND S24:S25
S27	13	RD (unique items)
S28	13	S27 NOT S22 NOT S17

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Set	Items	Description
S1	2966841	COMPUTER?
S2	188152	INTERACTIV?
S3	192	INTER()ACTIVE
S4	7710258	MODEL?
S5	2079738	HEART
S6	33742	(SURGICAL OR SURGERY)(3N)(INSTRUMENT? ? OR DEVICE? ?)
S7	375	S1 AND (S2:S3) AND S4 AND (S5:S6)
S8	2403	S5 AND S6
S9	0	S1 AND (S2:S3) AND S4 AND S8
S10	0	S1 AND S2 AND S3 AND S4 AND S5
S11	331	S1 AND (S2:S3) AND S4 AND S5
S12	44	S1 AND (S2:S3) AND S4 AND S6
S13	31	RD (unique items)
S14	13	S1(3N)(S2:S3)(2N)S4(3N)S5
S15	0	S1(3N)(S2:S3)(3N)S4(3N)S6
S16	13	S14
S17	6	RD (unique items)
S18	15	S1(3N)S4(3N)S6
S19	2134663	SIMULAT?
S20	6	S18 AND S19
S21	6	RD (unique items)
S22	6	S21 NOT S17
S23	45	S1(S)S4(S)S6(S)S19
S24	733848	MANUFACTUR?
S25	4131888	DESIGN?
S26	18	S23 AND S24:S25
S27	13	RD (unique items)
S28	13	S27 NOT S22 NOT S17
S29	27	S13 NOT S14 NOT S17 NOT S22 NOT S28
S30	27	RD (unique items)
S31	15	S18 NOT S30 NOT S29
S32	15	S18 NOT S17
S33	9	S18 NOT S22
S34	9	S33
S35	5	RD (unique items)

? show files

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Set	Items	Description
S1	43680	COMPUTER()AIDED()DESIGN
S2	242589	SIMULAT?
S3	1199392	MODEL OR MODELING OR MODELLING
S4	42757	(SURGICAL OR SURGERY)(3N)(DEVICE? ? OR INSTRUMENT? ?)
S5	701321	INTERACTIVE OR INTER()ACTIVE
S6	2431400	DESIGN
S7	7446325	MANUFACTUR?
S8	4324484	COMPUTER? ?
S9	41	S1 AND S4
S10	2	S8(3N)(S2 OR S3)(S)S4
S11	0	S5(3N)S8(S)S3(S)S4
S12	8677	S2 AND S3 AND S5 AND S8
S13	902	S1 AND S12
S14	683	S13 AND S7
S15	45	S12 AND S4
S16	83	S9 OR S10 OR S15
S17	68	RD (unique items)
S18	53	S17(S)(S6 OR S7)

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File 148:Gale Group Trade & Industry DB 1976-2003/Sep 04

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